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Forestry
Resources

Farmer Wildlife Survey Report



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FARMER-WILDLIFE SURVEY:
ATTITUDES OF FARMERS TOWARD WILDLIFE,
WILDLIFE USE, AND HABITAT RETENTION IN
SASKATCHEWAN

by

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1.0 INTRODUCTION

Farmers are an essential component of wildlife management in Saskatchewan. Forty-eight percent of the critical wildlife habitat in southern Saskatchewan and large areas of non-critical habitat are privately owned. Farmers use additional large areas of Crown-owned critical wildlife habitat through grazing leases and community pastures. The farm community is thus the principal manager of the habitat for more than half of our game species. Their decisions determine the amount and quality of habitat that remains in the province.

Access to wildlife areas for people pursuing wildlife recreation is also controlled, to a large extent, by the farm community. This access is essential to provide enjoyment of wildlife to all Saskatchewan residents, and for effective wildlife management.

Wildlife managers must also deal with another farm issue. Some wildlife species eat or otherwise damage agricultural crops. If this problem is not resolved, landowners may destroy wildlife habitat in order to prevent damage, thus reducing the supply of wildlife.

Wildlife is very important to Saskatchewan. Trappers earn between \$6 and \$10 million annually, while Saskatchewan residents enjoy more than 650,000 days of hunting recreation each year. Eighty percent of Saskatchewan people enjoy wildlife through non-consumptive recreation such as bird-watching and photography. This high demand for wildlife use and the importance of farmers in wildlife management makes communication with the farm community essential.

A survey was therefore conducted in 1984 to determine and gain an understanding of farmers' attitudes towards

wildlife, and especially to learn farm community opinion on habitat retention, land access for wildlife users, and wildlife damage problems. This survey was designed to be comparable to a similar 1976 survey (DTRR, 1978).

The specific objectives were as follows:

- 1) Determine age and sex of respondents, and collect farm history, size, location, proximity to large urban centres, land tenure and land use, to create a profile of the average Saskatchewan farmer.
- 2) Determine attitudes of farmers toward various species of wildlife, current population levels, and factors which have a negative impact on wildlife.
- 3) Determine the proportion of farmers that are wildlife recreationists, their target species and the proportion of their recreation that occurs on their own land.
- 4) Determine attitudes of farmers toward hunters, trappers, or other wildlife users, and their respective activities.
- 5) Determine the regional distribution of land posting, reasons for posting, types of signs used, and willingness to use conditional access signs.
- 6) Determine the nature, magnitude, location and extent of problems caused by wildlife and wildlife users, and their respective activities.
- 7) Determine amounts of breaking and drainage that have occurred recently, and determine the factors that farmers consider when deciding whether to undertake clearing, breaking or drainage.
- 8) Determine the attitudes of farmers regarding the desirability of retaining wildlife habitat, and their receptiveness toward programs and activities aimed at habitat retention.

- 9) Determine the level of awareness of farmers of government programs and activities related to wildlife management, and their assessment of these programs, particularly those implemented since 1976.

2.0 STUDY AREA

The study area (Fig. 1) consists of that portion of Saskatchewan south of the Northern Provincial Forest and covers 276,000 km². This area was divided into the four ecological zones used in wildlife management, and defined by the wildlife management zones. These ecological zones are roughly comparable to the 4 subregions used in the 1976 survey. However, recent revisions of the wildlife management zones has changed some areas (Table 1). The most significant changes are a 11,000 km² (20%) increase in the Grasslands Ecological Zone and a 26,000 km² (22%) decrease in the Farmlands Ecological Zone.

Table 1. Areas and Comparability of Subzones in 1976 and 1984 Surveys.

	Area (km ²)	Change Km ² %
Present Grasslands	65,000	
1976 Grazing Region	54,000	+11,000 +20%
Present Farmlands	91,000	
1976 Grain Farming Region	117,000	-26,000 -22%
Present Parklands	91,000	
1976 Mixed Farming Region	86,000	+5,000 +6%
Present Forest Fringe	29,000	
1976 Forest Fringe Region	33,500	-4,500 -13%
Present Total	276,000	
1976 Total	290,000	-14,500 -5%

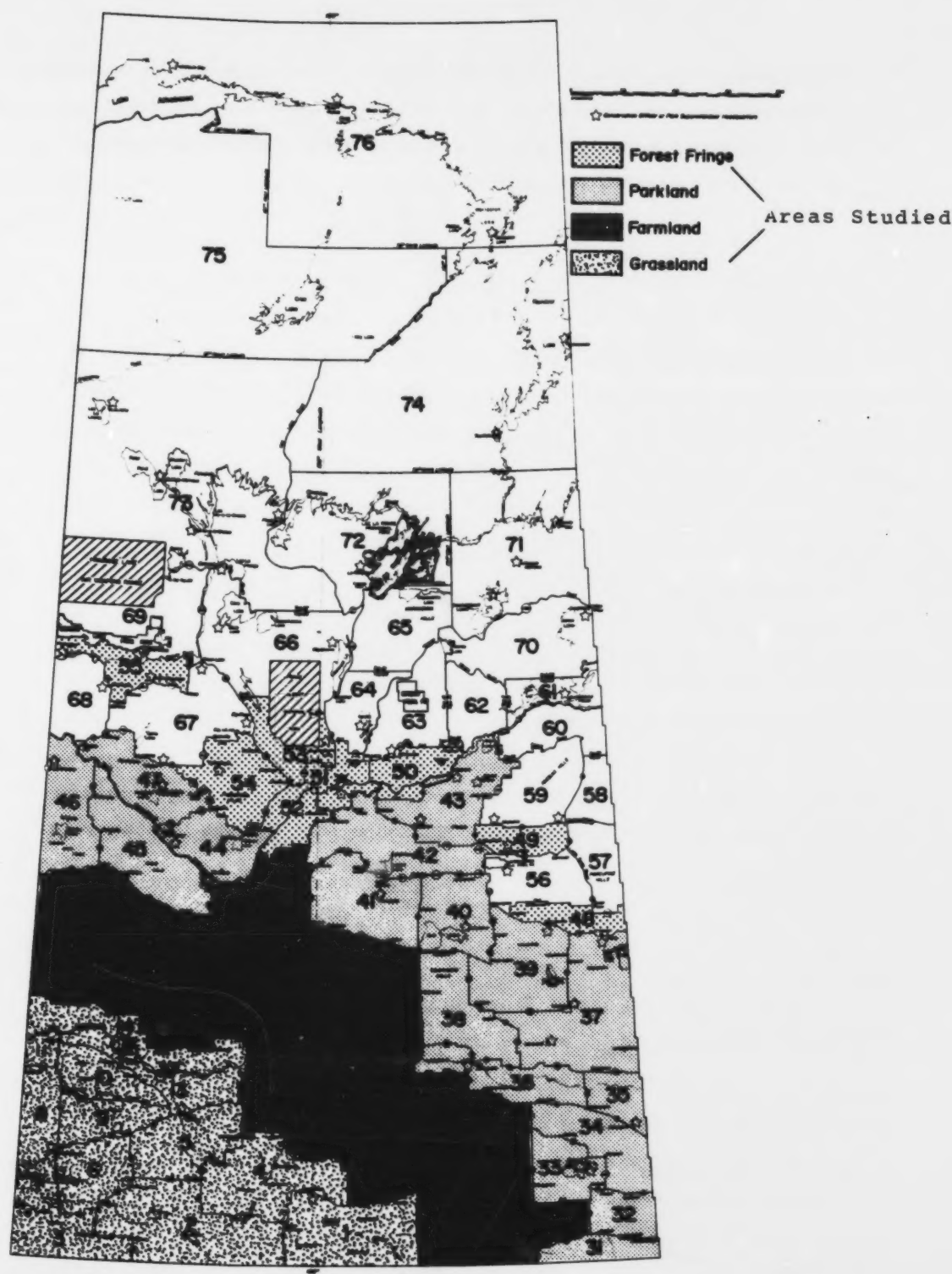


Figure 1. Ecological zones used as subzones in Saskatchewan Farmer-Wildlife Survey.

The total number of farmers within the study area is approximately 67,203, distributed as follows:

Grasslands -	10,793
Farmlands -	21,641
Parklands -	26,985
Forest Fringe -	7,784

3.0 SURVEY METHODS

Information was obtained by personal interviews with a random selection of farmers throughout the study area. Interviews were conducted by uniformed regional field staff from Saskatchewan Parks and Renewable Resources from January to April 1984. During that period, 773 interviews were completed, with 162 interviews from the Grasslands, 217 from the Farmlands, 242 from the Parklands, and 152 from the Forest Fringe.

The number of respondents selected from each Ecological Zone was derived by determining the minimum sample size that would ensure:

- 1) That results would be representative of the total population with at least 92% precision, 95 times out of 100.
- 2) That the number of observations would be sufficient to allow tests of significance to be performed on multi-cell contingency tables (Smith, 1975).

Selection of respondents was made using a clustered random sample technique. Each township was numbered sequentially, and then selection of townships was made using a table of random numbers. Four sections were then selected, again from a table of random numbers, and finally the quarter section within each section was selected from a table of random numbers, using 1 to signify southeast, 2 for southwest, 3 for northeast and 4 for northwest.

This sampling design created a bias toward oversampling of large farmers because the probability of a farmer being selected was directly proportional to his/her land holdings. This became evident when the farmer-wildlife survey results regarding average farm size were compared with similar data from the 1981 Statistics Canada Census.

A comparison of the Statistics Canada census data with the farm size distribution of farmers interviewed for the farmer-wildlife survey is shown in Figure 2. Two factors have contributed to the large discrepancies at both extremes of the scale. Acreage owners, defined as those with less than forty acres for the purposes of this study, were not interviewed. In addition, several operators of very large farms, 8 to 90 sections in size, were interviewed. Most of these large farms occur in the Grasslands Ecological Zone.

To determine whether this bias has affected the reliability of the survey results, statistical tests were performed on all responses to determine if significant differences exist between operators of different sized farms. For this purpose, farms were divided into the following four categories: GROUP 1 - 162 hectares or less (400 acres or less); GROUP 2 - 163 to 389 hectares (401 to 960 acres); GROUP 3 - 390 to 777 hectares (961 to 1920 acres); and GROUP 4 - 778 hectares or more (1921 acres or more). Significant differences are reported where detected.

The Regional Resource Officers who conducted the interviews were provided with the selected land locations, and using rural municipality maps, they determined who the farm operator of each selected land location was. The farm operators were telephoned and appointments were made to conduct interviews at the operators' homes.

Structured interviews were conducted according to a questionnaire (Appendix 1) designed to obtain the information required to meet the objectives set for the survey.

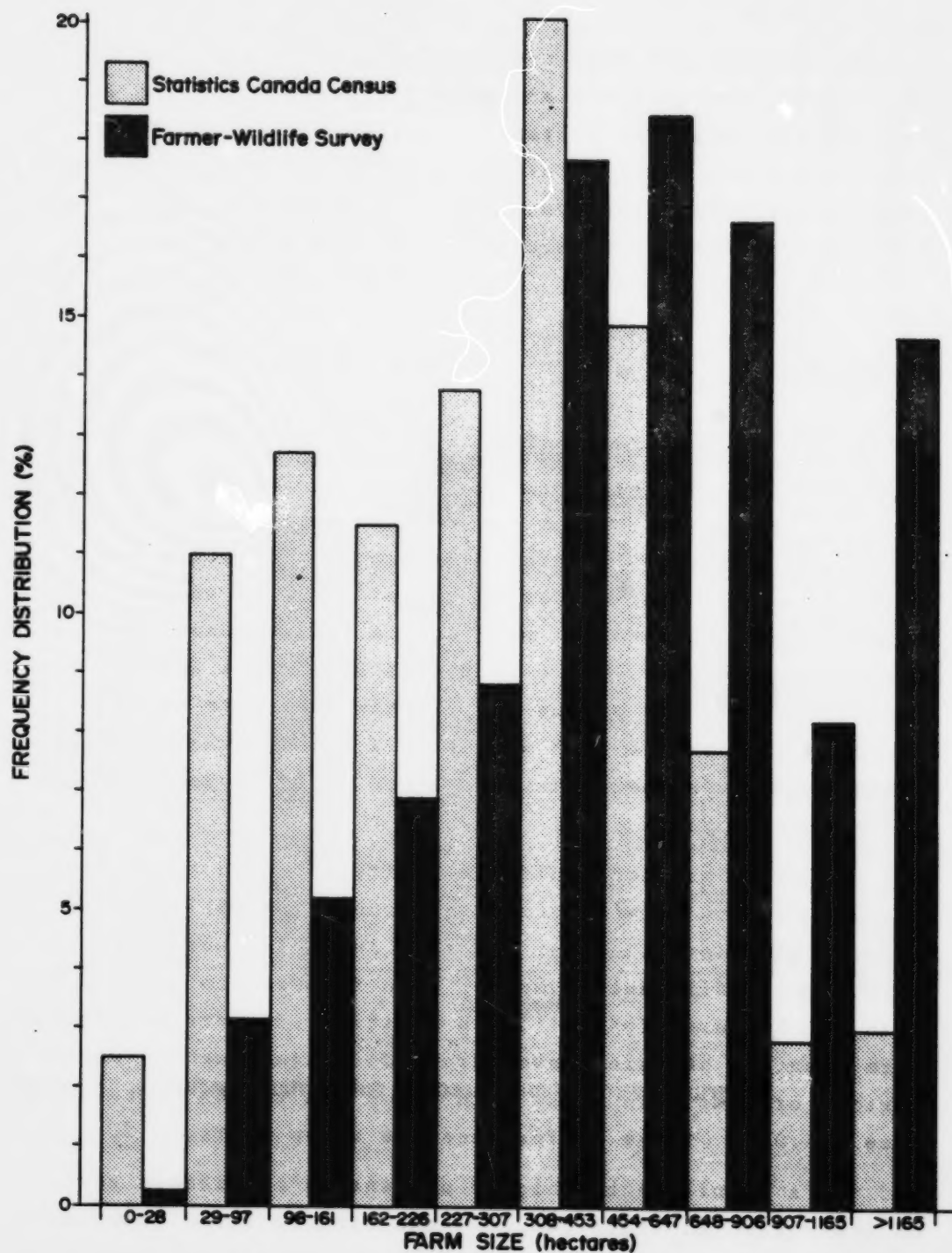


Figure 2. Distribution of Saskatchewan farm sizes, Statistics Canada 1981 data and Farmer-Wildlife Survey data 1984.

Information from the completed questionnaires was keypunched, and computer analysis followed, using the SAS (Statistical Analysis System) statistical package (SAS Institute Inc., 1982). This information is stored on computer tape, retrievable from Administrative Services Branch, Sask. Parks and Renewable Resources, for future reference.

4.0 RESULTS

4.1. The Farmer and His Land

4.1.1. The Farmer

The average Saskatchewan farmer is 47 years old (Fig. 3) and has farmed for 26 years. Over 97 percent are males. Eleven percent do not live on their farms at any time throughout the year, while just over 85 percent live on their farms for 12 months of the year. This contrasts quite markedly with the results of the 1976 survey, when over 94 percent of Saskatchewan farmers lived on their land throughout the whole year.

There are no significant differences in these demographic factors between ecological zones ($p > .05$). However, farmers who control larger areas of land, 390 hectares or more, are significantly younger than farmers who control less than 390 hectares ($p < .001$). In addition, farmers who control more than 390 hectares have farmed for significantly shorter periods of time than those with farms 163 to 389 hectares in size ($p < .05$). These differences are shown in Table 2.

A significantly higher percentage of farmers reside on their land the full year, as the size of farms increases ($p < .001$) and a progressively larger percentage of farmers do not live on their land, as the size of farms decreases, as illustrated in Table 3.

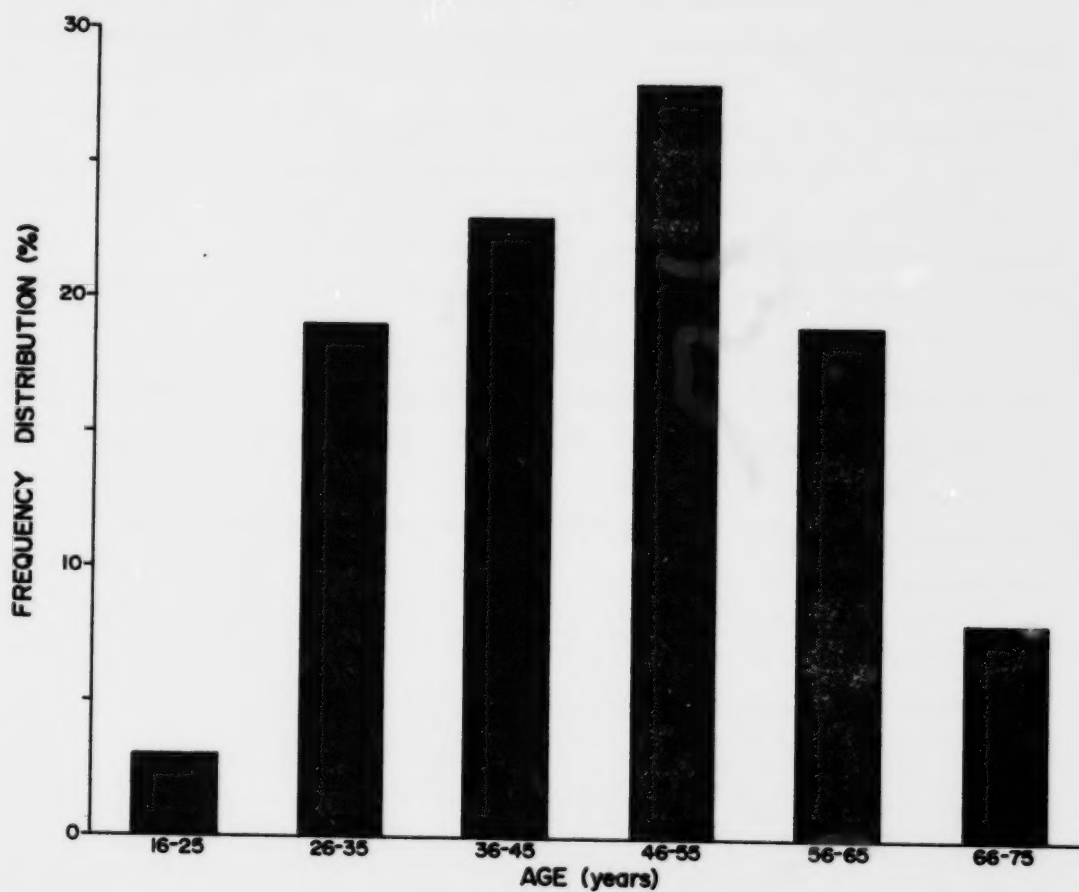


Figure 3. Frequency distribution of ages of Saskatchewan farmers.

Table 2. Mean Age of Farmers and Length of Time Farming by Size of Farm.

	Size of Farm			
	162 Hectares or Less	163-389 Hectares	390-777 Hectares	778 Hectares or More
Average Age	51	50	46	45
Average Years Farmed	26	28	25	26

Table 3. Percentage of Farmers Who Live on Their Farms by Size of Farm.

Size of Farm	Zero Months	1 to 11 Months	12 Months	Total
162 Hectares or Less	30%	6%	64%	100%
163-389 Hectares	15%	3%	82%	100%
390 to 777 Hectares	7%	4%	89%	100%
778 Hectares or More	5%	2%	93%	100%

4.1.2. Attitudes Toward Wildlife

The attitudes of Saskatchewan farmers toward wildlife are generally quite favorable. Ninety-seven percent of all farmers interviewed indicated that wildlife adds to the enjoyment of living or working on their farm, while 1% are undecided. There is no statistical difference between ecological zones ($p > .05$).

In 1976, farmers were asked if they liked to have wildlife on their land. At that time, 76% indicated they liked to have wildlife on their land, while 13% responded negatively, and 11% didn't care. The attitude toward wildlife, if the negative and positive responses from the two surveys are compared, appears to have become more positive in 1984,

with fewer farmers with an undecided or indifferent attitude.

However, in 1984, 19% of all farmers also indicated that wildlife subtracts from the enjoyment of working or living on their farm. This ambivalence can be attributed to the fact that some wildlife species are welcome on the farm while others are not, as only 0.5% of all farmers indicated that all wildlife species subtract enjoyment. Waterfowl and furbearers were identified by 7% of all farmers as being problematic, while 2% of the respondents find that big game cause problems. The "other" category, which includes raccoons, mice, magpies and other miscellaneous species, were considered a nuisance by 8% of the farmers.

Wildlife provides various benefits to farmers that range from monetary to entirely aesthetic benefits. It is the non-monetary benefits that most farmers reported being recipients of. Sixty-six percent responded that they had viewed or photographed wildlife, 40% had visits from friends or relatives who came to hunt, view, or trap wildlife, while 40% reported enjoyment from hunting or trapping, 31% had obtained meat from hunting and 12% had received income from trapping. Just 1% reported payment from hunters for services, while another 1% reported other miscellaneous benefits (Table 4). Significantly more of the larger farmers (farming more than 389 hectares) reported they received meat from hunting ($p < .05$) and had enjoyed hunting or trapping ($p < .01$) than did smaller farmers. In addition, significantly more farmers in the Parklands and Forest Fringe Ecological Zones had received trapping income ($p < .05$) and had enjoyed hunting and trapping ($p < .01$) in the previous year.

Table 4. Percentage of Farmers Who Have Received Benefits From Wildlife In 1983.

Benefit	Ecological Zone				
	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
Enjoyment of Viewing or Photographing Wildlife	63%	70%	68%	64%	66%
Visits From Friends or Relatives Who Come to Hunt, Trap or View Wildlife	39%	34%	43%	42%	40%
Enjoyment of Hunting or Trapping	36%	35%	47%	41%	40%
Meat From Hunting	29%	25%	38%	28%	31%
Income From Trapping	10%	6%	15%	15%	12%
Payment For Services to Hunters	1%	1%	1%	1%	1%
Other Benefits (Miscellaneous)	2%	-	2%	2%	1%

4.1.3. Interest in Wildlife

Approximately 20% of Saskatchewan farmers are currently members of a wildlife organization, while 14% have been members in the past (Table 5).

Table 5. Farmers Who Are or Have Been Members of a Wildlife Organization.

<u>Ecological Zone</u>	<u>Current Member</u>	<u>Past Member</u>
Grasslands	19%	21%
Farmlands	17%	10%
Parklands	23%	14%
Forest Fringe	21%	13%
All	20%	14%

Ninety-one percent of current members belong to a chapter of the Saskatchewan Wildlife Federation, as did 79% of those who formerly belonged to a wildlife organization.

Sixty-nine percent of the farmers interviewed indicated they are interested in receiving more information about wildlife in Saskatchewan. Interest is similar in all ecological zones ($p > .05$).

Of those who want more wildlife information, 87% want information on individual species, their characteristics and requirements, while 80% want general population figures, the range of wildlife species, and harvest statistics. Seventy-two percent want habitat information such as how to improve habitat to attract more wildlife, and 70% want information on wildlife damage prevention techniques. There is little variation between different parts of the province as to the type of information that is of interest (Table 6), except that farmers in the Forest Fringe Ecological Zone are significantly more interested in habitat information than farmers in the Grasslands and Farmlands Zones ($p < .05$).

Table 6. Types of Wildlife Information Wanted by Saskatchewan Farmers.

<u>Ecological Zone</u>	<u>General Species Information</u>	<u>Population & Harvest Information</u>	<u>Habitat Information</u>	<u>Damage Prevention Information</u>
Grasslands	87%	83%	68%	63%
Farmlands	87%	75%	66%	67%
Parklands	88%	82%	73%	73%
Forest Fringe	88%	81%	83%	75%
All	87%	80%	72%	70%

4.1.4. Farmers' Use of Wildlife

Most farmers interviewed indicated that they make some

recreational use of wildlife by hunting or trapping, or non-consumptive use, such as bird watching, photography and hiking. As shown in Table 7, non-consumptive use is the form of wildlife recreation most frequently engaged in. Thirty-nine percent of all farmers indicate this use. Farmers in the Parkland Ecological Zone indicate a significantly higher proportion of non-consumptive use of wildlife (49%) than in the other zones ($p < .001$).

Hunting big game is a close second. Thirty-eight percent of all farmers partake in this sport, while twenty-five percent hunt waterfowl and seventeen percent hunt upland game birds. A significantly greater number of hunters from the Parklands and Forest Fringe hunt big game ($p < .05$), while the distribution for waterfowl and upland bird hunting is more equitable between ecological zones.

Significantly more farmers with large farms (>389 hectares) hunt waterfowl ($p < .001$) and upland birds ($p < .01$). In addition, significantly more of the younger farmers hunt ($p < .001$). Seventy-nine percent of farmers 16 to 35 years old and 75% of farmers 35 to 54 years old have hunted in the last five years, compared to 57% of farmers 55 or older. Previous findings that younger farmers operate larger farms is likely also a factor in this correlation.

Table 7. Percentage of Farmers Who Are Hunters, Trappers, and Non-Consumptive Wildlife Users Per Ecological Zone.

Ecological Zone	Hunters				Non-Consumptive Users
	Big Game	Waterfowl	Upland Birds	Trappers	
Grasslands	35%	27%	20%	13%	32%
Farmlands	31%	25%	18%	10%	36%
Parklands	44%	26%	16%	14%	49%
Forest Fringe	43%	22%	14%	18%	35%
All Zones	38%	25%	17%	14%	39%

Table 8. Percentage of Hunting & Trapping Done on Own Farm Per Ecological Zone.

BIG GAME HUNTING

<u>Percentage</u>	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
0-25%	57%	48%	27%	37%	40%
26-50%	14%	14%	20%	29%	19%
51-75%	3%	4%	8%	7%	6%
76-100%	26%	34%	45%	27%	35%
Total	100%	100%	100%	100%	100%

59%
41%

WATERFOWL HUNTING

<u>Percentage</u>	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
0-25%	56%	29%	27%	29%	35%
26-50%	16%	13%	12%	-	12%
51-75%	3%	-	3%	6%	3%
76-100%	25%	58%	58%	65%	50%
Total	100%	100%	100%	100%	100%

47%
53%

UPLAND BIRD HUNTING

<u>Percentage</u>	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
0-25%	30%	16%	15%	33%	23%
26-50%	13%	31%	10%	22%	18%
51-75%	-	-	-	-	-
76-100%	57%	53%	75%	45%	59%
Total	100%	100%	100%	100%	100%

41%
59%

TRAPPING

<u>Percentage</u>	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
0-25%	8%	15%	-	-	5%
26-50%	17%	-	22%	7%	13%
51-75%	-	-	4%	14%	5%
76-100%	75%	85%	74%	79%	77%
Total	100%	100%	100%	100%	100%

18%
82%

Overall, the percentage of farmers who have trapped in the past five years is 14%. The greatest proportion of farmers who trap (18%) are from the Forest Fringe Ecological Zone, while the lowest proportion (10%) occurs in the Farmlands Ecological Zone.

Saskatchewan farmers carry out much of their wildlife based recreation on their own land. This varies according to activity and ecological zone (Tables 8 and 9), but with the exception of big game hunting, more than half of farmers participating in wildlife recreation do 50% or more of these activities on their own land.

The greatest amount of hunting done on one's own land is for upland birds. Fifty-nine percent of farmers who hunt upland birds do more than half their hunting on their own land.

When farm size is taken into consideration, the general trend that emerges is that progressively fewer farmers carry out their hunting and trapping on their own farms, as farm size decreases. The smallest farm size category supports substantially less of the owners' hunting activities. However, this trend is not apparent in non-consumptive wildlife activities.

Table 9. Percentage of Non-Consumptive Activities Done on Own Farm.

<u>Ecological Zone</u>	<u>0-25%</u>	<u>26-50%</u>	<u>51-75%</u>	<u>76-100%</u>	<u>Total</u>
Grasslands	41% — 50% — 9%		2% — 50% — 48%		100
Farmlands	38% — 58% — 20%		14% — 42% — 28%		100
Parklands	32% — 43% — 11%		6% — 57% — 51%		100
Forest Fringe	23% — 39% — 16%		3% — 61% — 58%		100
All	33% — 47% — 14%		7% — 53% — 46%		100

4.1.5. Opinion on Amount of Wildlife on Land and on Population Changes

Respondents were asked their opinion on the amount of various species of wildlife on their land. With the exception of ducks and beaver, the majority of farmers feel that there are just enough, or too little of each wildlife species on their farm. Table 10 shows the responses and compares them to the 1976 survey.

Of particular interest are the changes in attitude that have occurred since 1976 toward big game, ducks and geese. In 1984, fewer farmers feel there are too little geese and big game, while conversely, fewer farmers feel there are too many ducks.

Table 10. Opinions of Respondents on the Amount of Wildlife on Their Lands, 1976 & 1984 (%).

Opinions	Big Game		Upland Birds		Ducks		Geese		Beaver		Songbirds	
	'76	'84	'76	'84	'76	'84	'76	'84	'76	'84	'76	'84
Too Little	52	30	63	64	16	18	35	22	-	10	-	57
Too Much	1	8	1	1	30	18	7	10	-	38	-	1
Just Enough	38	59	31	32	48	59	41	62	-	40	-	36
No Opinion	9	3	5	3	6	5	17	6	-	12	-	6
Total	100	100	100	100	100	100	100	100	100	100	100	100

There are significant differences between opinions of farmers in the different farm size categories regarding ducks and big game ($p < .01$). In general, farmers in the smallest farm size category feel there are too few ducks and big game animals while farmers in the largest farm size category feel population levels are adequate, and a few feel they are too high. Attitudes of farmers in the two middle farm size

categories are similar and fall in between the two extremes.

In addition, farmers were asked whether they felt populations of various wildlife species had changed over the last five years. The results are presented in Table 11.

Table 11. Farmers' Opinions on Wildlife Population Changes Between 1979-1984.

<u>Species or Species Group</u>	<u>Decreased</u>	<u>Increased</u>	<u>No Change</u>	<u>No Opinion</u>	<u>Total</u>
Antelope	17%	44%	35%	4%	100%
Mule Deer	6%	54%	27%	13%	100%
Whitetails	34%	24%	37%	5%	100%
Bear	10%	36%	43%	11%	100%
Other Big Game	14%	26%	42%	18%	100%
Upland Birds	47%	16%	34%	3%	100%
Waterfowl	31%	29%	37%	3%	100%
Beaver	12%	48%	29%	11%	100%
Furbearers	23%	38%	36%	3%	100%
Songbirds	20%	14%	59%	7%	100%

4.1.6. The Future of Wildlife

When asked about the significance of several factors which may impact on wildlife populations, the effect of habitat destruction is considered significant by the highest number of Saskatchewan farmers. Forty-one percent of all farmers indicated that the clearing and breaking of habitat is having a significant effect on wildlife populations. This varied significantly between ecological zones ($p < .05$), from 19% in the Grasslands, to 54% in the Parklands and 50% in the Forest Fringe (Table 12).

Table 12. Farmers Who Feel That Habitat Destruction is Significant.

<u>Ecological Zone</u>	<u>Yes</u>	<u>No</u>	<u>Undecided</u>	<u>Total</u>
Grasslands	19%	76%	5%	100%
Farmlands	39%	57%	4%	100%
Parklands	54%	41%	5%	100%
Forest Fringe	50%	45%	5%	100%
All	41%	54%	5%	100%

Significantly fewer farmers with large land holdings (390 hectares or more) feel that habitat destruction is affecting wildlife populations ($p < .001$). However, when these attitudes are analyzed by farm size and ecological zone, the differences are significant only in the Parklands ecological zone ($p < .001$).

In second place is the effect of illegal hunting and trapping. Thirty-four percent of all farmers feel that illegal hunting and trapping is significantly decreasing wildlife populations. Again, there are significant discrepancies between ecological zones ($p < .001$), from 55% in the Forest Fringe, to 17% in the Grasslands (Table 13).

Table 13. Farmers' Attitudes Toward Significance of Illegal Hunting and Trapping.

<u>Ecological Zone</u>	<u>Decreasing Wildlife Populations</u>			<u>Total</u>
	<u>Yes</u>	<u>No</u>	<u>Undecided</u>	
Grasslands	17%	69%	14%	100%
Farmlands	28%	62%	10%	100%
Parklands	37%	50%	13%	100%
Forest Fringe	55%	33%	12%	100%
All	34%	54%	12%	100%

Thirty-two percent of the respondents feel that hunting by Treaty Indians is significantly decreasing wildlife populations. There is a vast divergence in attitudes between ecological zones regarding this factor. Significantly more farmers in the Parklands and Forest Fringe Zones feel that hunting by Indians is decreasing wildlife populations ($p < .001$) compared to the Grasslands and Farmlands Zones (Table 14). Significantly more farmers who are waterfowl and big game hunters feel that hunting by Indians is affecting wildlife populations ($p < .05$).

Table 14. Farmers' Attitudes Toward Significance of Hunting by Indians.

<u>Ecological Zone</u>	<u>Decreasing Wildlife Populations</u>			<u>Total</u>
	<u>Yes</u>	<u>No</u>	<u>Undecided</u>	
Grasslands	13%	81%	6%	100%
Farmlands	10%	88%	2%	100%
Parklands	45%	42%	13%	100%
Forest Fringe	66%	25%	9%	100%
All	32%	60%	8%	100%

Twenty-five percent of Saskatchewan farmers think that sport hunting and trapping are significantly decreasing wildlife populations. The effect is considered to be decreasing wildlife populations by a significantly lower proportion of farmers in the Grasslands Zone ($p < .05$) compared to farmers in the other three ecological zones (Table 15). Significantly fewer farmers who hunt big game or waterfowl feel that sport hunting and trapping are decreasing wildlife populations than those who do not hunt ($p < .05$).

Table 15. Farmers' Attitudes Toward Significance of Sport Hunting and Trapping (%).

<u>Ecological Zone</u>	<u>Decreasing Wildlife Populations</u>			<u>Total</u>
	<u>Yes</u>	<u>No</u>	<u>Undecided</u>	
Grasslands	17%	77%	6%	100%
Farmlands	27%	67%	6%	100%
Parklands	23%	70%	7%	100%
Forest Fringe	32%	53%	15%	100%
All	25%	67%	8%	100%

4.2. Access For Wildlife Users

4.2.1. Attitudes Toward Wildlife Use

Overall, most farmers approve of wildlife based recreation including hunting. There are no significant variations in attitudes toward hunting between ecological zones ($p > .05$). Table 16 shows that farmers in 1984 have a more approving attitude toward hunting than they did in 1976. Approval of big game hunting increased from 74% to 84%, upland bird hunting from 67% to 75%, and waterfowl hunting from 82% to 84%. The responses also show less indifference or ambivalence in attitudes in 1984 than in 1976.

Table 16. Comparison of Attitudes Toward Hunting, 1976 to 1984.

<u>Species Groups</u>	<u>Approve</u>		<u>Disapprove</u>		<u>Undecided or Indifferent</u>	
	<u>1975</u>	<u>1984</u>	<u>1975</u>	<u>1984</u>	<u>1975</u>	<u>1984</u>
Big Game	74%	84%	15%	11%	11%	5%
Upland Game	67%	75%	22%	19%	10%	6%
Waterfowl	82%	89%	8%	8%	11%	3%

Significantly fewer farmers who feel that sport hunting and trapping are decreasing wildlife populations approve of big game and upland bird hunting and trapping ($p < .01$).

Seventy-seven percent of all farmers approve of trapping. There is no significant variation between the ecological zones in those who approve of trapping ($p > .05$), but there are significantly more farmers in the Forest Fringe Zone who are undecided.

Table 17. Percentage of Farmers Who Approve of Trapping.

<u>Ecological Zone</u>	<u>Approve</u>	<u>Do Not Approve</u>	<u>Undecided</u>
Grasslands	74%	20%	6%
Farmlands	75%	14%	11%
Parklands	77%	15%	8%
Forest Fringe	79%	8%	13%
All	77%	14%	9%

4.2.2. Attitudes Toward Wildlife Users

The majority of farmers are willing to permit access by most people providing permission is asked, while some allow access to friends and family only, and a few refuse access to everyone. Attitudes vary somewhat depending on the type of activity involved.

Hunting

Almost all Saskatchewan farmers feel it is important for wildlife users to ask permission for access to private land. Ninety-seven percent feel asking permission to hunt on land which is near to one's dwelling is important, with no statistical differences between ecological zones ($p > .05$). Somewhat fewer farmers (84%) feel it is important to ask permission on land remote from one's dwelling, but a significantly

higher proportion of farmers ($p < .01$) in the Grasslands and Forest Fringe Ecological Zones indicate this is important (Table 18).

Table 18. Attitudes Toward Importance of Asking Permission to Hunt.

	Ecological Zone				
	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
PRIVATE LAND CLOSE TO DWELLING					
Yes	97%	96%	97%	99%	97%
No	2%	3%	2%	1%	2%
Undecided	1%	1%	1%	-	1%
PRIVATE LAND DISTANT FROM DWELLING					
Yes	89%	80%	80%	90%	84%
No	6%	15%	15%	9%	12%
Undecided	5%	5%	5%	1%	4%
ORGANIZED CROWN PASTURES					
Yes	85%	80%	75%	78%	79%
No	9%	12%	15%	11%	12%
Undecided	6%	8%	10%	11%	9%
PRIVATELY LEASED CROWN LAND					
Yes	89%	89%	83%	88%	87%
No	7%	8%	13%	7%	9%
Undecided	4%	3%	4%	5%	4%
VACANT CROWN LAND					
Yes	57%	41%	31%	28%	38%
No	30%	47%	59%	66%	52%
Undecided	13%	12%	10%	6%	10%

Most farmers also feel that it is important to ask permission to hunt on all Crown land, with the exception of that which is vacant (Table 18). Significant differences

exist between zones regarding vacant Crown land. Just 28% of farmers in the Forest Fringe feel that permission should be asked on vacant crown land. This increases through the zones to 57% in the Grasslands Zone ($p < .001$).

Even more farmers feel it is important to ask permission to trap on both private and Crown land. Ninety-eight percent of farmers think asking permission to trap on private land close to their residence is important, while 92% feel it is important on private land distant from their residence. On Crown lands, 82% felt asking permission to trap on organized pastures is important, 90% on privately leased Crown land and 47% on vacant Crown land (Table 19).

Table 19. Attitudes Toward Importance of Asking Permission to Trap.

	Ecological Zone				
	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
PRIVATE LAND CLOSE TO DWELLING					
Yes	98%	97%	99%	99%	98%
No	2%	1%	1%	1%	1%
Undecided	-	1%	-	-	1%
PRIVATE LAND DISTANT FROM DWELLING					
Yes	91%	91%	92%	95%	92%
No	7%	6%	6%	4%	6%
Undecided	1%	3%	2%	1%	2%
ORGANIZED CROWN PASTURES					
Yes	85%	86%	80%	77%	82%
No	9%	7%	13%	13%	11%
Undecided	6%	7%	7%	10%	7%
PRIVATELY LEASED CROWN LAND					
Yes	90%	94%	87%	89%	90%
No	7%	5%	10%	8%	8%
Undecided	3%	1%	3%	3%	2%

Table 19. (continued)

	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
VACANT CROWN LAND					
Yes	61%	53%	44%	35%	48%
No	28%	36%	46%	57%	42%
Undecided	11%	11%	10%	8%	10%

While most farmers feel it is important that hunters ask permission for access to land, most give permission to almost everyone who asks. Seventy-one percent of farmers said they give permission to hunt to almost everyone who asks, 17% give permission to friends and family only, while 7% give permission to no one. The remaining 5% use other criteria regarding whom they allow to hunt on their land (Table 20). Farmers in the two smaller farm size categories (389 hectares or less) are significantly less likely to allow everyone to hunt (66% and 62%) compared to farmers in the two largest farm size categories (76% and 74%) ($p < .01$).

Table 20. Percentage of Farmers Who Give Various Groups Permission to Hunt on Land

<u>Groups Given Permission</u>	<u>Ecological Zone</u>				
	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
Everyone Who Asks	78%	71%	69%	65%	71%
Friends and Family Only	9%	18%	18%	23%	17%
No One	6%	6%	9%	7%	7%
Other	7%	5%	4%	5%	5%

Farmers were asked about the number of people who hunted on their land last year, as well as the number who asked per-

mission and those who were given permission. Approximately half of all farmers were either unable to give an enumeration, or did not respond to these questions.

From those whom responded, however, it is apparent that proportionally more hunters ask for permission to hunt in the Grasslands than in other ecological zones. In addition, the responses reveal that substantially more hunters are asking permission to hunt than in 1975 (Table 21). A similar percentage are granted access for hunting, although 17% more big game hunters and 11% fewer waterfowl hunters are being granted permission.

Table 21. Percentage of Hunters Who Ask Permission For Access and Percentage Given Permission (1983 and 1975).

<u>Type of Hunter</u>	<u>Percentage Who Ask Permission</u>		<u>Percentage Given Permission</u>	
	<u>1983</u>	<u>1975</u>	<u>1983</u>	<u>1975</u>
Big Game	52%	14%	95%	78%
Upland Bird	44%	13%	94%	92%
Waterfowl	64%	26%	87%	98%
Other	58%	-	97%	100%

More than half of all farmers think that hunting pressure over the last five years has remained the same for each game group in each region. Those respondents who perceived differences in hunting pressure generally perceived reductions for upland birds and waterfowl, and were evenly split on whether big game hunting pressure is up or down (Table 22).

Table 22. Attitudes Toward Changes in Hunting Pressure in the Last Five Years (1979-1983).

	Ecological Zones				
	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
BIG GAME					
Same	56%	63%	48%	60%	56%
Decreased	20%	18%	30%	15%	22%
Increased	21%	17%	21%	20%	20%
Not Sure	3%	2%	1%	5%	2%
UPLAND BIRDS					
Same	61%	62%	60%	60%	61%
Decreased	22%	24%	27%	24%	24%
Increased	12%	11%	4%	6%	8%
Not Sure	5%	4%	9%	10%	7%
WATERFOWL					
Same	68%	54%	56%	64%	59%
Decreased	20%	28%	26%	15%	23%
Increased	7%	15%	9%	11%	11%
Not Sure	5%	3%	9%	10%	7%

Province wide, the results are quite similar to those from 1975. The comparisons are shown in Table 23.

Table 23. Comparison of Perceptions of Changes in Hunting Pressure, 1975 and 1983.

	Same		Decreased		Increased	
	<u>1975</u>	<u>1983</u>	<u>1975</u>	<u>1983</u>	<u>1975</u>	<u>1983</u>
Big Game	50%	57%	30%	22%	20%	19%
Upland Birds	57%	61%	27%	24%	16%	8%
Waterfowl	55%	59%	21%	23%	25%	11%

Trapping

Thirty-eight percent of Saskatchewan farmers reported

trapping activities on their land. Trapping occurs on significantly more farms in the Forest Fringe Ecological Zone, where 50% of the farmers reported trapping on their land ($p < .05$), while trapping occurs on 39%, 35%, and 31% of farms in the Parklands, Grasslands and Farmlands, respectively.

On farms where trapping occurs, 55% of the trapping pressure is sustained by the landowners or their immediate family only. Thirty-nine percent of the trapping activities on farms are by trappers other than family members while trapping by both family and others occurs 6% of the time. The figures for each ecological zone are shown in Table 24.

Table 24. Percentage of Farms Which Receive Trapping Pressure From Family, Other People, or Both.

	<u>Family</u>	<u>Other Than Family</u>	<u>Both Family and Other</u>	<u>Total</u>
Grasslands	62%	33%	5%	100%
Farmlands	49%	45%	6%	100%
Parklands	58%	38%	4%	100%
Forest Fringe	51%	38%	11%	100%
All	55%	39%	6%	100%

Land access for trapping is not a limiting factor in agricultural Saskatchewan. Of the farms where trapping does not presently occur, 69% of the operators would allow trapping. Twenty-four percent would not allow trapping on their land, while 7% are undecided. There are no statistically significant differences ($p > .05$) between the ecological zones in attitudes of farmers regarding trapping on their land.

The primary reasons for not allowing trapping are to protect wildlife (36%), because the farmer considers trapping inhumane (20%), while 18% consider set traps hazardous, and 10% do not want anyone on their land (Table 25).

Table 25. Reasons For Prohibiting Trapping on Land.

<u>Reasons</u>	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
To Protect Wildlife	47%	38%	27%	34%	36%
Trapping Inhumane	17%	29%	18%	7%	20%
Traps Hazardous	15%	17%	20%	22%	18%
Don't Want Others on Land	8%	6%	17%	7%	10%
Other	13%	10%	18%	30%	16%
Total	100%	100%	100%	100%	100%

Non-consumptive Use

Less than a quarter of all farms are used by birdwatchers, hikers or photographers, but a significantly higher percentage of farms in the Grasslands Ecological Zone and a significantly lower percentage of farms in the Forest Fringe Zone receive non-consumptive use ($p < .05$). Thirty-two percent of farms in the Grasslands are used for non-consumptive recreation, while 24% of farms in both the Farmlands and Parklands, and 17% in the Forest Fringe, are used by birdwatchers, photographers, and other non-consumptive users.

On farms where non-consumptive use occurs, the average number of users per farm a year is 15 in the Grasslands, 7 in the Farmlands, 18 in the Parklands, and 7 in the Forest Fringe. Larger farms receive significantly more non-consumptive use ($p < .001$). Farms less than 390 hectares average 7 users per year, while farms of larger sizes average between 12 and 16 users per year.

Most Saskatchewan farmers are quite receptive to non-consumptive wildlife users. Sixty-four percent responded that they allow all non-consumptive user groups on their land, 33%

require that non-consumptive users ask permission, 1% want only friends and family on land, and 2% will allow no one on their land.

Although almost all farmers in every Ecological Zone allow non-consumptive use, significantly more farmers in the Grasslands and Forest Fringe Zones consider it important that permission be asked for access to their land ($p < .05$). Forty-three percent from the Grasslands and 40% from the Farmlands require that permission be asked, compared to 25% and 29% from the Farmlands and Parklands, respectively (Table 26).

Table 26. Percentage of Farmers Who Allow Non-consumptive User Groups on Land.

Ecological Zone	Allow Everyone	Allowed With Permission Only	Allow Friends and Family Only	Allow No One	Total
Grasslands	52%	43%	1%	4%	100%
Farmlands	73%	25%	-	2%	100%
Parklands	69%	29%	1%	1%	100%
Forest Fringe	56%	40%	1%	3%	100%
All	64%	33%	1%	2%	100%

4.2.3. Wildlife User Damage

Past experiences of damage by wildlife users may cause farmers to prohibit or closely control access to their land for wildlife based recreation. Therefore, it is important to determine the frequency and magnitude of wildlife user damage that Saskatchewan farmers experience, and determine whether damage could be curtailed by additional regulations or new initiatives.

Forty percent of all farmers reported that wildlife users had caused damage within the last five years (1979-1983),

Respondents were less able to identify which age group of people cause the most problems. Forty percent feel there is no difference between age groups and 30% responded that they don't know what age group causes the most problems. There are no significant differences between ecological zones ($p > .05$).

Farmers were asked about specific types of damage they had encountered within the last year. Gates left open was the most frequent complaint, followed by damaged fences and driven on or trampled crops. Garbage left lying around was another frequent complaint (Table 28). These same complaints were dominant in the 1976 survey, as well.

Table 28. Percentage of Farmers Reporting Occurrence of Specific Problems Caused by Wildlife Users Per Ecological Zone (1983).

Type of Damage	Grasslands	Farmlands	Parklands	Forest Fringe	All
Gates Left Open	19%	17%	12%	6%	14%
Fences Cut or Damaged	17%	12%	11%	9%	12%
Garbage Left	6%	11%	5%	6%	7%
Open Pits Left	3%	5%	1%	2%	3%
Crop Trampled or Driven On	9%	12%	11%	16%	12%
Buildings or Machinery Damaged	4%	4%	4%	5%	4%
Livestock Injured or Killed	2%	3%	2%	2%	2%
Other	3%	3%	3%	5%	3%

Farmers were also asked to estimate the cost of the damage caused in the last year, in terms of both monetary costs and hours of work to amend. Five to 10 percent of farmers who had some type of damage did not give an estimate of the amount because it was very minor, or they felt they could not make an accurate estimate.

Table 29. Frequency Distribution of Costs of Various Types of Wildlife User Damage (Percentage of All Farmers).

Type of Damage	No Damage	Damage, But No Cost	Damage, But No Cost Estimate	<\$100	\$100 to \$500	\$501 - \$1000	\$1001 or More	Total
Gates Left Open	85.6%	0.1%	10.5%	2.2%	1.3%	0.3%	-	100%
Damaged Fences	86.6%	0.3%	8.5%	2.8%	1.4%	0.3%	0.1%	100%
Garbage Left	92.2%	0.4%	5.3%	1.4%	0.7%	-	-	100%
Open Pits Left	96.5%	-	1.9%	0.9%	0.7%	-	-	100%
Driven on Crops	87.3%	0.3%	5.0%	1.6%	5.2%	0.5%	0.1%	100%
Damaged Property	95.0%	-	2.5%	1.4%	0.9%	0.1%	0.1%	100%
Livestock Killed or Injured	97.1%	0.8%	0.1%	-	0.6%	0.9%	0.5%	100%
Other	96.3%	-	2.0%	1.0%	0.5%	0.1%	0.1%	100%

Table 30. Frequency Distribution of Hours of Work Made Necessary by Wildlife User Damage (Percentage of All Farmers).

Type of Damage	No Damage	Damage, But No Work	Damage, But No Estimate of Work	2 Hours or Less	3 to 5 Hrs	6 to 12 Hrs	13 hrs or More	All
Gates Left Open	85.6%	0.3%	3.7%	6.0%	1.8%	1.4%	1.2%	100%
Fences Cut or Damaged	86.6%	-	2.5%	7.2%	2.2%	1.3%	0.2%	100%
Garbage Left	92.2%	0.5%	2.7%	4.0%	0.3%	0.3%	-	100%
Open Pits Left	96.5%	0.1%	1.9%	1.1%	0.1%	0.1%	-	100%
Crops or Land Driven On	87.3%	0.4%	11.8%	0.5%	-	-	-	100%
Buildings or Machinery Damaged	95.0%	-	3.2%	1.4%	-	0.3%	0.1%	100%
Livestock Killed or Injured	97.2%	0.1%	2.1%	0.1%	0.1%	0.1%	0.3%	100%
Other	96.3%	-	2.7%	0.6%	0.1%	-	0.3%	100%

Livestock killed or injured, land or crops driven on, and property damage cause the most monetary damage. Gates left open and damaged fences are most expensive in terms of labour costs. Frequency distributions of work and costs incurred by the various types of damage are shown in Tables 29 and 30.

In addition to causing hardship and expense to farmers, damage by wildlife users may affect attitudes toward wildlife and wildlife recreation. Significantly more farmers who have had damage caused by wildlife users in the past five years feel that wildlife subtracts from the enjoyment of their farm ($p < .001$). This has implications for the future of wildlife and wildlife recreation in Saskatchewan.

4.2.4. Land Posting

Signs posted to limit public access to farmland are fairly prevalent throughout agricultural Saskatchewan. These areas of posted land limit opportunities to wildlife recreation for other Saskatchewan residents. Therefore, it is important to determine the extent of, and the reasons for land posting, and to assess its impact so that steps can be taken to ensure that optimal opportunities for wildlife recreation are made available.

Signs posted to limit access are most frequently aimed at hunters. Eighty-five percent of all farmers who post land are posting it against hunters, while 43% are aiming them at everyone (Table 31). These percentages indicate there is some overlap between the two categories.

Last year, 31% of all farmers had land posted on their farm. The Grasslands, where 38% of farmers had land posted, has the highest percentage of posting while the Farmlands has the lowest percentage, at 26% (Table 32).

In 1975, 19% of all farmers were posting land on their

Table 31. Groups Land Posting is Aimed at (%).

<u>Ecological Zone</u>	<u>Hunters</u>	<u>Everyone</u>
Grasslands	85%	45%
Farmlands	87%	56%
Parklands	84%	29%
Forest Fringe	84%	52%
All	85%	43%

Table 32. Proportion of Farms That Had Land Posted Last Year (1983).

<u>Ecological Zone</u>	<u>Percentage of Farms With Land Posted</u>
Grasslands	38%
Farmlands	26%
Parklands	32%
Forest Fringe	30%
All	31%

farms. Despite the increase indicated in the percentage of farmers posting land, the trend over the last five years shows a slight decrease in the amount of land posted. Fifty-two percent of farmers post the same amount of land now as they did five years ago, 33% post less now, while 15% post more, with no significant differences between ecological zones. Overall, approximately 18% of farmers post less land than they did five years ago. This apparent contradiction can be explained by the fact that most farmers post just specific types of land (Table 33).

The majority of farmers reported that protection of livestock is the most important reason for posting land.

Table 33. Of Farmers Who Post Land, The Percentage Who Post Various Types.

	Ecological Zone				
	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
Around Livestock	86%	77%	79%	61%	77%
Yard or Home Quarter	76%	59%	57%	44%	58%
Wildlife Areas	44%	42%	44%	43%	43%
Remote Areas	33%	37%	40%	42%	38%
Whole Farm	34%	30%	33%	31%	32%
Other Areas	33%	13%	23%	33%	25%

Second is the safety of self and family, while third in importance is protection of property. These reasons correspond with the finding that around livestock and the yard or home quarter are frequently posted areas. Prevention of vehicle use on private property came in fourth while protection of wildlife is fifth in importance.

These five factors are the major reasons for posting land in all ecological zones, but the rank order varies somewhat (Table 34). The reasons for posting are essentially unchanged since 1975, except that prevention of vehicle use has increased in importance.

Significantly more farmers who have had wildlife user damage in the last five years post their land than those who have not had damage ($p < .05$). Forty-four percent of farmers who have had damage caused by wildlife users in the last five years currently post their land compared to 22% of those who have not had damage.

The 1984 survey results indicate that 16.5% of farm land is posted, with some variation between ecological zones.

Table 34. Most Important Reasons For Posting Land by Ecological Zone, 1984.

Reason	Percentage of Farmers to Whom Reason is Most Important				
	Grasslands	Farmlands	Parklands	Forest Fringe	All
Protect Livestock	28%	32%	29%	21%	28%
Safety of Family	18%	20%	20%	22%	20%
Protect Property	19%	16%	17%	17%	16%
Prevent Vehicle Use on Land	15%	13%	15%	9%	14%
Protect Wildlife	8%	11%	14%	13%	12%
Other	10%	8%	5%	18%	10%

Percentages and estimates of the area posted per ecological zone are shown in Table 35.

Table 35. Estimates of Amount of Land Posted Per Ecological Zone (1983).

Ecological Zone	Percentage of Zone Posted	Estimated Number of Posted Land	
		(hectares)	(acres)
Grasslands	19.7%	1,276,309	3,152,484
Farmlands	12.2%	1,109,447	2,740,334
Parklands	15.8%	1,427,657	3,526,312
Forest Fringe	13.4%	388,764	960,246
All	16.5%	4,202,177	10,379,376

However, this does not mean that all wildlife recreation is prohibited on these lands, as many farmers who post land use conditional access signs, such as "Hunting With Permission Only" or "No Vehicles Allowed". Nine percent use conditional access signs exclusively, 11% use no hunting or no trespassing signs only, and 80% use a combination of both. The specific types of signs used per ecological zone are shown in Table 36.

Table 36. Types of Signs Used By Farmers Who Post Land (1983).

Type of Sign	Grasslands	Farmlands	Parklands	Forest Fringe	All
No Trespassing	44%	49%	48%	51%	48%
No Hunting	75%	65%	53%	50%	60%
Hunting With Permission Only	56%	41%	55%	53%	51%
No Hunting - Cattle at Large	11%	14%	10%	13%	11%
No Vehicles Allowed	19%	9%	4%	13%	10%
Please Close Gates	19%	4%	9%	13%	11%
Other	17%	9%	15%	2%	11%

Compared to 1975, farmers are tending to use more conditional access signs, such as "Hunting With Permission Only" (51% compared to 30%). However, an increase in the use of "No Hunting" signs (60% compared to 50%) and "No Trespassing" signs (48% compared to 20%) is evident. This apparent contradiction may indicate an increasing tendency to use more than one type of sign, as 90% of farmers indicate they did in 1983.

Farmers who use "No Hunting" or "No Trespassing" signs were asked if they would be willing to switch to conditional access signs if they were provided free of charge. Ninety-four to 96% percent of farmers in the Farmlands, Parklands and Forest Fringe Zones indicated a willingness to switch to conditional access signs, while significantly fewer farmers (87%) are willing to use conditional signs in the Grasslands Zone ($p < .01$). As well, farmers in the smallest (162 hectares or less) and the largest (778 hectares or more) farm size categories are significantly less willing to switch to conditional access signs ($p < .05$).

The percentage of farmers who are prepared to switch

to each type of conditional access sign per ecological zone is shown in Table 37.

Table 37. Willingness to Switch to Conditional Access Signs (1984).

<u>Type of Sign</u>	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
Hunting With Permission Only					
Yes	52%	59%	59%	74%	61%
Undecided	1%	8%	5%	2%	4%
Hunting on Foot Only					
Yes	42%	39%	30%	49%	39%
Undecided	5%	2%	8%	4%	5%
No Vehicles Past This Point					
Yes	36%	30%	25%	48%	34%
Undecided	7%	3%	8%	4%	6%
Please Close Gates					
Yes	35%	38%	30%	52%	38%
Undecided	2%	2%	3%	-	2%
Other					
Yes	6%	24%	11%	17%	15%
Undecided	-	3%	13%	4%	5%

4.3. Damage by Wildlife

Province wide, 32% of farmers reported that they have had damage from wildlife in 1983. This is very similar to the 30% reported in 1976. Significantly more farmers in the Parklands Zone are subject to wildlife damage ($p < .05$), where 39% were affected in 1983, compared to 28-30% in the other three ecological zones. This is a dramatic increase from the 23% of Parkland farmers reporting damage in 1975. The opposite trend appears in the Farmlands where incidence of wildlife damage declined from 37% to 29%.

Significantly more wildlife damage is experienced as farm size increases ($p < .001$). Twenty-four to thirty percent of farms 389 hectares or less were subject to wildlife damage in 1983, compared to 40 to 57% of farms larger than 389 hectares.

Respondents were asked to identify the types of wildlife damage they had experienced in 1983 (Table 38). The most common type of problem is crop damage by waterfowl, which affected 15% of the farmers interviewed, while damage by big game is second, affecting 13%.

In 1975, 25% of all farmers reported waterfowl depredation on their farms. Because 1975 is considered a year of fairly high and 1983 a year of fairly low waterfowl depredation, a downward trend is not necessarily indicated (Gollop, M. A. 1984). This decline in waterfowl damage also probably explains the decline in wildlife damage in the Farmland Ecological Zone.

Damage by big game shows a substantial increase, from affecting 3% of farmers in 1975 to affecting 13% in 1983. Predation on livestock has remained quite constant, occurring on 3% of farms in 1975, and on 4% of farms in 1983.

Table 38. Proportion of Farmers Experiencing Wildlife Damage in 1983.

Type of Damage	Grasslands	Farmlands	Parklands	Forest Fringe	All
Waterfowl Damage	4%	18%	20%	13%	15%
Big Game Damage	21%	8%	16%	7%	13%
Livestock Predation	2%	<1%	6%	7%	4%
Beaver Damage	1%	2%	9%	8%	5%
Other Damage	1%	3%	4%	4%	3%

Frequency distribution of farmers' estimates of costs incurred by wildlife damage are shown in Table 39.

Table 39. Frequency Distribution of Costs of Damage by Wildlife in 1983 (% of All Farmers).

<u>Type of Damage</u>	<u>No Damage</u>	<u>Damage But No Cost Estimate</u>	<u><\$200</u>	<u>\$200 - \$999</u>	<u>\$1000 - \$1999</u>	<u>\$2000 - \$2999</u>	<u>\$3000+</u>	<u>Total</u>
Waterfowl Damage	85.3%	0.1%	3.0%	5.6%	4.0%	1.2%	0.8%	100%
Big Game Damage	87.1%	0.8%	5.0%	5.4%	0.8%	0.3%	0.6%	100%
Livestock Predation	96.1%	-	1.9%	1.3%	0.3%	0.3%	0.1%	100%
Beaver Damage	94.8%	0.4%	1.0%	2.2%	0.9%	0.3%	0.4%	100%
Other Damage	96.8%	0.3%	1.5%	1.0%	0.4%	-	-	100%

These estimates, combined with the proportion of farmers who experience each type of damage, indicate that waterfowl crop depredation is the most costly problem on a provincial basis. Big game damage is the second most costly, followed by beaver damage. Livestock predation is a problem primarily in the Parklands and Forest Fringe Ecological Zones.

Wildlife damage, in addition to the expenses incurred to the farm community, has another negative effect. Experiencing damage by wildlife is correlated with negative attitudes toward wildlife. Significantly more farmers (26%) who have had damage by wildlife in the past year reported that wildlife subtracts from the enjoyment of their farm, compared with 14% of those who did not have any wildlife damage ($p < .001$).

4.4. Awareness and Evaluation of Wildlife Damage Prevention/Compensation Programs

Prevention and/or compensation programs are in place for the three major types of wildlife damage. To determine if these programs are effective, farmers were asked if they are aware of the programs, and if so, were asked to evaluate them.

4.4.1. Waterfowl Crop Depredation Program

Twenty-one percent of all farmers reported that crop damage by waterfowl occurs frequently in their area. This varied significantly from a low of 11% in the Grasslands to a high of 25% in the Forest Fringe ($p < .001$) (Table 40). Approximately 20% never have any damage by waterfowl.

There are also significant differences by farm size ($p < .001$). Thirty-four percent of small farms (162 hectares or less) never have waterfowl damage, while 16% are frequently subject to damage. On very large farms (more than 777 hectares),

Table 40. Frequency of Waterfowl Damage.

<u>Ecological Zone</u>	<u>Never</u>	<u>Seldom</u>	<u>Sometimes</u>	<u>Frequently</u>
Grasslands	36%	23%	30%	11%
Farmlands	14%	24%	37%	24%
Parklands	12%	30%	35%	24%
Forest Fringe	23%	26%	26%	25%
All	20%	26%	33%	21%

25% of the farmers reported that they never have waterfowl damage, while 28% frequently have damage.

Exactly half of the farmers interviewed are aware of the Waterfowl Crop Damage Prevention Program, a program aimed at preventing crop damage through the use of scare cannons, lure crops and bait stations. As shown in Table 41, most farmers with a frequent incidence of waterfowl damage are aware of this program ($p < .001$).

Table 41. Percentage of Farmers Aware of Waterfowl Crop Depredation Program by Frequency of Waterfowl Damage.

<u>Aware of Program</u>	<u>Never</u>	<u>Seldom</u>	<u>Sometimes</u>	<u>Frequently</u>
Yes	20%	46%	50%	80%
No	80%	54%	50%	20%
Total	100%	100%	100%	100%

Twelve percent of all farmers reported receiving direct benefit from waterfowl damage prevention activities. Significantly fewer farmers have benefitted from this program in the Grasslands (1%) and Parklands (10%) compared to the Farmlands (18%) and Forest Fringe (17%) Ecological Zones ($p < .001$).

Thirty-six percent of farmers who frequently have waterfowl damage have benefitted from the activities carried out under the Waterfowl Crop Depredation Program, while 15% and 10% of those who sometimes and seldom have damage, respectively, have benefitted.

Those farmers who have benefitted from the Waterfowl Crop Damage Prevention Program were asked to evaluate its success. Twenty-two percent rated it very successful, 69% rated it moderately successful, while 4% rated it as not successful. Four percent were undecided about its success.

Eighty percent of farmers are aware that compensation for waterfowl crop damage is available from Saskatchewan Crop Insurance Corporation, with no significant differences between ecological zones ($p > .05$). Just 9% of all farmers have collected compensation from Saskatchewan Crop Insurance since 1978, however. Twenty-two percent of those who frequently have waterfowl damage have received compensation from Saskatchewan Crop Insurance in the last five years, while 8% of those who sometimes have damage, and 4% of those who seldom have damage, have received compensation in this time period.

4.4.2. Wildlife-Landowner Assistance Program

Twenty-four percent of all respondents reported that big game animals frequently or sometimes cause damage to crops, feedstacks or beehives. The remainder (76%) seldom or never receive damage from big game. Significantly fewer farmers in the Farmlands Ecological Zone reported chronic problems with big game ($p < .001$), as shown in Table 42.

Thirty percent of farmers are aware of activities to prevent big game damage carried out under the Wildlife Landowner Assistance Program, primarily distribution of fencing and bloodmeal, and operation of intercept feeding sites. Farmers from the Grasslands Ecological Zone show a significantly higher

Table 42. Frequency of Damage by Big Game.

<u>Ecological Zone</u>	<u>Never</u>	<u>Seldom</u>	<u>Sometimes</u>	<u>Frequently</u>
Grasslands	48%	17%	8%	17%
Farmlands	76%	14%	6%	4%
Parklands	52%	22%	12%	14%
Forest Fringe	46%	25%	21%	8%
All	57%	19%	13%	11%
	76%		24%	

level of awareness of this program ($p < .01$) (Table 43). Significantly more farmers who frequently have big game damage are aware of the Wildlife-Landowner Assistance Program ($p < .001$). Sixty-eight percent of farmers in this category are aware of the program, compared to 41% of those who sometimes have damage, 35% who seldom do, and 19% of those who never have big game damage.

Table 43. Percentage of Farmers Aware of Wildlife-Landowner Assistance Program.

<u>Ecological Zone</u>	
Grasslands	42%
Farmlands	29%
Parklands	25%
Forest Fringe	27%
All	30%

Just 4% of all farmers have received assistance from the Wildlife-Landowner Assistance Program, with no significant differences between ecological zones ($p > .05$). Twenty percent of those who have frequent damage, 8% of those who sometimes

have damage, and 4% of those who seldom have damage have been assisted by the Wildlife-Landowner Assistance Program.

Limited compensation for big game damage is available if prevention measures are not successful. Just 2% of all respondents reported receiving compensation for damage through the Wildlife-Landowner Assistance Program. Nine percent of those who frequently have damage, 4% who sometimes have damage, and 1% who seldom have big game damage have been compensated through this program.

Those farmers who have received assistance through the Wildlife-Landowner Assistance Program were asked to give an evaluation. Seventeen percent rate it as very successful, 69% as moderately successful, while 7% feel it is not successful, and 7% are undecided about its success.

4.4.3. Beaver Control Program

Nine percent of all farmers have been assisted with controlling beavers on their farm and 21% are aware that assistance is available (Table 44). Both figures are significantly higher in the Forest Fringe and Parkland Zones ($p < .001$), as expected due to the high beaver populations there.

Table 44. Farmers Who Have Received Aid and Farmers Aware of Aid Provided to Others for Beaver Problems.

<u>Ecological Zone</u>	<u>% of Farmers Who Have Received Aid</u>	<u>% of Farmers Aware of Others Receiving Aid</u>
Grasslands	2%	6%
Farmlands	2%	4%
Parklands	10%	28%
Forest Fringe	22%	49%
All	9%	21%

Farmers who have received assistance from the Beaver Control Program were asked to evaluate the adequacy of it. Eight percent feel the aid available is very adequate, 37% feel it is moderately adequate, while 52% feel it is not adequate. Three percent are undecided.

4.5. Wildlife Habitat Protection

4.5.1. Habitat and Habitat Loss

Areas of native vegetation most often constitute good quality wildlife habitat. Most farmers reported some native areas on their farms, most frequently in the form of yards and waterbodies (Table 45).

Table 45. Frequency of Habitat Types on Saskatchewan Farms (%).

<u>Habitat Type</u>	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
Yard	98%	94%	90%	93%	94%
Sloughs, creeks, lakeshores	90%	92%	94%	87%	91%
Grass or shrubland	92%	76%	87%	81%	84%
Shelterbelts or windbreaks	67%	57%	63%	70%	64%
Bushland or woodland	30%	36%	93%	91%	65%

Despite the high percentage of farms which contain native habitat, according to the 1981 Statistics Canada census just 24% of farmland in Saskatchewan is native land, including one percent of the total area that is native woodland. As shown in Table 46, the percentage of native habitat has decreased steadily since 1951 in agricultural Saskatchewan.

This erosion of the habitat base is the most critical factor that threatens the future of wildlife populations. Farmers were asked about their habitat alteration activities and plans in an attempt to determine the dynamics and factors involved.

Table 46. Proportion of Improved (non-native) and Unimproved (native) Area in Agricultural Saskatchewan 1951 to 1981 (Statistics Canada).

Year	% Improved	% Unimproved		Total
		Woodland	Other	
1951	62.9%	4.8%	32.3%	100%
1961	66.9%	3.4%	29.7%	100%
1971	71.4%	1.5%	27.1%	100%
1981	75.9%	1.1%	23.0%	100%

Fifty-three percent of all farmers have altered native areas in the past five years, varying significantly from 44% in the Grasslands, 48% in the Farmlands, 61% in the Parklands, and 55% in the Forest Fringe Ecological Zone ($p < .01$). The result is that 6.5% of native areas, or 2.9% of their total farm area of all farmers surveyed was altered in the five year period from 1979 to 1983. These figures vary between ecological zones, indicating that the Grasslands is undergoing the least land use conversion, while the Parklands is undergoing the most (Table 47).

Ninety percent of all areas being converted are native grasslands and bushlands, with waterbodies constituting the remaining 10%. The variations between ecological zones are shown in Table 48.

Table 47. Percentage of Native Land Converted to Agricultural Use 1979-1983.

Ecological Zone	Percentage of All Native Land Converted	Percentage of Total Farm Area Converted
Grasslands	2.2%	1.5%
Farmlands	12.1%	2.5%
Parklands	15.6%	4.9%
Forest Fringe	12.5%	5.0%
All Zones	6.5%	2.9%

Table 48. Percentage of Alteration That Was Drainage, Cultivation of Drained Areas, or Cultivation of Bushland and Grassland (1979-1983).

	Drainage Only	Drainage & Cultivation	Cultivation of Native Grass or Bushland	Total
Grasslands	1.8%	2.8%	95.4%	100%
Farmlands	-	12.5%	87.5%	100%
Parklands	0.3%	10.0%	89.7%	100%
Forest Fringe	3.1%	8.7%	88.2%	100%
All	1.1%	8.8%	90.1%	100%

Land use figures from Statistics Canada indicate that the amount of land improved for agriculture in Saskatchewan increased by 755,000 hectares (1.87 million acres) from 1976 to 1981. Using the information provided by farmers regarding the proportions of type of land altered, this means that approximately 8,300 hectares of wetlands were drained, 66,400 hectares were drained and cultivated, and that 680,300 hectares of grassland or bushland were cleared and/or cultivated in that five year period.

To get some indication of future habitat loss trends, those farmers who have native areas remaining on their farms were asked whether they have plans to convert these areas to agricultural production.

Twenty-eight percent indicate that they do plan some conversion in the near future, while another 6% are undecided. Significantly more farmers in the Parklands and Forest Fringe Ecological Zones are planning breaking and drainage in the near future ($p < .01$) (Table 49).

Table 49. Percentage of Farmers Planning to Break, Drain or Cultivate Native Areas in the Near Future by Ecological Zone.

<u>Ecological Zone</u>	<u>Yes</u>	<u>No</u>	<u>Undecided</u>	<u>All</u>
Grasslands	19%	74%	7%	100%
Farmlands	22%	72%	6%	100%
Parklands	37%	56%	7%	100%
Forest Fringe	33%	63%	4%	100%
All	28%	66%	6%	100%

4.5.2. Reasons For Habitat Alteration

The major factor considered by farmers who have cleared or drained land in the past five years was increased income. The second most frequent consideration was improving machinery maneuverability, while eliminating weedy areas was third (Table 50).

Table 50. Factors Considered by Farmers Who Have Drained, Cleared or Broken Land in the Past 5 Years (1979-1983) by Ecological Zone.

<u>Factors Considered</u>	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
Increased Income	56%	58%	55%	53%	56%
Improved Machinery Maneuverability	12%	14%	19%	17%	16%
Clean Up Weedy Areas	7%	8%	9%	6%	8%
Drain Flooded Areas	4%	3%	7%	5%	5%
Eliminate Insect Areas	1%	4%	-	-	1%
Eliminate Beaver Problems	-	-	2%	2%	1%
Other	20%	13%	8%	17%	13%

To provide further insight, cross-tabulations were performed to determine demographic, attitudinal and experience factors that are correlated with habitat alteration in the past five years. Cultivation and drainage of native areas was undertaken significantly more often by younger farmers than older farmers ($p < .001$). Sixty-five percent of farmers 16 to 34 years of age have converted native areas in this time period, compared to 56% aged 35 to 54 years, and 39% of those 55 years or older. Farm size is another significant

factor ($p < .001$). Alteration has occurred on 31% of farms 162 hectares or smaller, on 41% of farms 163 to 389 hectares, on 63% of farms 390 to 777 hectares, and on 61% of farms larger than 777 hectares.

In general, an interest in wildlife does not seem to have affected habitat destruction activities in the past. Farmers who are members of wildlife organizations, or who take part in wildlife-based recreation are as likely to clear or break native areas as those who do not ($p > .05$). In fact, significantly more farmers who hunt have cleared or drained land in the past five years ($p < .01$). However, age is the correlating factor that provides an explanation. More younger farmers hunt, and more younger farmers are altering habitat. Therefore, those more inclined to hunt are also those more inclined to increasingly develop their farm for agriculture.

Awareness that habitat destruction is having an impact on wildlife populations does not seem to affect farmers' activities either. As many farmers who feel that habitat destruction is significantly decreasing wildlife populations have drained or cleared land in the past 5 years as those who feel habitat destruction is not significant ($p > .05$).

Negative attitudes toward wildlife or negative experiences with wildlife are correlated with habitat destruction activities. Thirty-seven percent of farmers who indicated that wildlife subtracts from the enjoyment of their farm are planning habitat alteration in the near future. This number contrasts significantly with 28% who are planning to alter habitat, but who did not indicate that wildlife subtracts from the enjoyment of their farm ($p < .05$).

Significantly more farmers who report they have some chronic incidence of waterfowl or big game damage have drained or broken land in the past five years ($p < .05$) compared to those who reported they never have such damage. In addition,

significantly more farmers who want information on how to prevent wildlife damage have altered habitat in the last 5 years ($p < .05$). As well, significantly more farmers who have a high frequency of damage from big game are planning habitat conversion in the near future ($p < .05$). Forty-two percent of farmers who frequently have big game damage are planning habitat conversion, compared to 31% of those who have lower frequencies or 24% of those who never have damage from big game. Significant differences were not evident in those with varying frequencies of waterfowl damage ($p > .05$).

4.5.3. Evaluation of Habitat Retention Incentives

Those farmers who are undecided or have definite plans to alter native areas on their farm were asked whether the implementation of various incentive programs would make retaining these areas worthwhile.

The most popular incentive was receiving payment equal to income produced if land was put into agricultural use, favored by 64% of all respondents. The other monetary incentives (Table 51) were favoured by approximately half of all respondents, with the exception of changing regulations so that hunters could be charged for access to land. Just 12% felt this incentive would make habitat retention worthwhile.

The non-monetary incentives such as provision of acknowledgement signs, provision of a free big game licence, or provision of trees, seeds, and information to enhance habitat would influence approximately 20% of farmers to retain the habitat on their farms.

Farmers with larger land holdings indicate less receptiveness to habitat retention incentives. The percentage of farmers who would retain habitat is progressively smaller as farm size increases for the following incentives: payment equal to foregone agricultural production; selling of easement

Table 51. Percentage of Farmers Planning to Alter Habitat Who Would Retain Habitat if Incentives Were Implemented.

Type of Incentive	Grasslands	Farmlands	Parklands	Forest Fringe	All
PAYMENT EQUAL TO AGRICULTURAL PRODUCTION					
Yes	64%	57%	71%	62%	64%
Undecided	9%	13%	10%	12%	11%
INCLUSION OF NATIVE LAND IN WHEAT BOARD QUOTA					
Yes	39%	49%	54%	56%	51%
Undecided	11%	10%	11%	6%	9%
REIMBURSEMENT FOR TAXES PAID ON NATIVE AREAS					
Yes	48%	47%	49%	54%	50%
Undecided	5%	14%	11%	14%	11%
SELLING EASEMENT TO GUARANTEE RETENTION					
Yes	45%	41%	50%	60%	49%
Undecided	14%	21%	21%	11%	18%
ABLE TO CHARGE A FEE TO HUNTERS					
Yes	12%	9%	14%	11%	12%
Undecided	4%	4%	6%	4%	5%
PROVISION OF TREES, SEEDS & INFO. TO ENHANCE HABITAT					
Yes	26%	18%	19%	36%	23%
Undecided	7%	14%	13%	8%	12%
CREATION OF GAME PRESERVES ON LAND					
Yes	21%	20%	17%	27%	20%
Undecided	16%	17%	15%	14%	16%
PROVISION OF FREE BIG GAME LICENCE					
Yes	16%	14%	18%	24%	18%
Undecided	2%	6%	11%	6%	7%

Table 51. (cont'd)

<u>Type of Incentive</u>	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
PROVISION OF ACKNOWLEDGEMENT SIGNS					
Yes	18%	10%	16%	27%	17%
Undecided	11%	17%	13%	14%	14%

to guarantee retention; provision of trees, seeds and information to enhance habitat; provision of a free big game licence; and provision of acknowledgement signs.

All respondents were asked if the implementation of habitat incentive programs would encourage them to increase the amount of habitat on their farms. Providing payment equal to the net income if habitat was in agricultural production would clearly have an impact. Forty-four percent of all farmers would increase the amount of habitat if this incentive were implemented, while 43% are undecided if they would or not. Approximately a third would expand habitat areas if monetary incentives such as inclusion of habitat in Wheat Board quota calculation, reimbursement for taxes paid on native lands, or buying easements were implemented.

Thirteen to eighteen percent of all farmers would increase the amount of habitat if non-monetary incentives such as provision of acknowledgement signs, provision of trees, seeds and habitat development information, or provision of a free big game licence, were initiated.

The proportion of farmers interested varies quite markedly between ecological zones for some of the proposed incentives. A comparison is available in Table 53.

Twenty-one percent of all farmers would not be interested in taking part in any habitat incentive program,

Table 52. Farmers Who Would Increase the Amount of Habitat on Their Farms Upon Implementation of Incentives.

<u>Type of Incentive</u>	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
PAYMENT EQUAL TO AGRICULTURAL PRODUCTION					
Yes	34%	31%	53%	53%	44%
Undecided	12%	16%	14%	11%	43%
REIMBURSEMENT FOR TAXES PAID ON NATIVE LANDS					
Yes	28%	29%	31%	44%	32%
Undecided	10%	10%	14%	15%	12%
SELLING EASEMENT TO RETAIN HABITAT					
Yes	28%	23%	33%	37%	30%
Undecided	9%	13%	19%	18%	15%
INCLUSION OF HABITAT IN WHEAT BOARD QUOTA CALCULATION					
Yes	20%	28%	34%	37%	30%
Undecided	9%	7%	13%	12%	10%
PROVISION OF TREES, SEEDS & INFORMATION TO DEVELOP HABITAT					
Yes	28%	16%	17%	16%	18%
Undecided	10%	7%	11%	11%	10%
CREATION OF GAME PRESERVES ON LAND					
Yes	16%	11%	14%	18%	15%
Undecided	7%	11%	13%	15%	11%
PROVISION OF A FREE BIG GAME LICENCE					
Yes	14%	10%	13%	20%	14%
Undecided	4%	5%	7%	6%	5%
PROVISION OF ACKNOW- LEDGEMENT SIGNS					
Yes	12%	9%	13%	18%	13%
Undecided	10%	4%	7%	8%	7%

Table 52. (continued)

<u>Type of Incentive</u>	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
ABLE TO CHARGE A FEE TO HUNTERS					
Yes	6%	2%	8%	6%	5%
Undecided	4%	5%	5%	7%	5%

while 31% would participate, but would not guarantee participation for a specified period of time. Twenty-four percent would participate in a habitat program they found favourable for a period of 1 to 5 years, 9% would participate for 6 to 20 years, while 10% would participate for more than 20 years. There are significant differences between ecological zones ($p < .001$). In general, the Parklands and Forest Fringe Zone farmers are more receptive toward habitat incentive programs, and would participate for longer periods of time (Table 53).

Table 53. Length of Time Farmers Would Take Part in a Habitat Program.

<u>Length of Time</u>	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
Would Participate But No Duration Guaranteed	38%	25%	34%	27%	31%
1 to 5 Years	20%	33%	24%	29%	27%
6 to 20 Years	9%	8%	10%	14%	10%
20+ Years	5%	7%	17%	14%	11%
Would Not Participate	28%	27%	15%	16%	21%
Total	100%	100%	100%	100%	100%

Of those farmers who indicated that they have definite plans to modify habitat on their farms in the near future, or are undecided, 16% would be unwilling to take part in an

incentive program, and 28% would take part, but would not guarantee any retention period. Thirty-one percent would enroll habitat for 1 to 5 years, 12% for 6 to 20 years, and 13% for 20 or more years. There are no significant differences between ecological zones ($p > .05$).

4.6. Enforcement of Wildlife Act and Regulations

The majority of Saskatchewan farmers feel that enforcement of the Wildlife Act and Regulations is adequate in their area. Overall, 62% think enforcement is adequate, 11% are undecided, and 26% feel that enforcement is inadequate. There are no significant differences between ecological zones ($p > .05$).

Those respondents who feel enforcement is not adequate were asked what tactics could be used to make improvements. Increasing the number of conservation officers was given the highest priority. Second priority is given to increasing patrols year-round, followed by increased patrols during hunting season. Increasing night patrols is fourth in importance, and increased use of aircraft is fifth. The priority given each of these tactics varies somewhat between ecological zone, as shown in Table 54.

Table 54. Priorization of Tactics Which Would Improve Enforcement.

<u>Tactic</u>	<u>Grasslands</u>	<u>Farmlands</u>	<u>Parklands</u>	<u>Forest Fringe</u>	<u>All</u>
Increase Number of Conservation Officers	1st	2nd	1st	3rd	1st
Increase Patrols Year-round	2nd	3rd	2nd	2nd	2nd
Increase Patrols During Hunting Season	4th	1st	3rd	4th	3rd
Increase Night Patrols	5th	5th	4th	1st	4th
Increase Use of Aircraft	3rd	4th	5th	5th	5th

Of those who felt enforcement is not adequate, over half have been aware of a Conservation Officer in their area in the last year, while 5% are uncertain if there was or not. The awareness of the presence of a Conservation Officer was significantly higher in the Forest Fringe (77%) than in other ecological zones (Table 55) ($p < .001$).

Table 55. Awareness of a Conservation Officer in the Area in the Past Year (1983).

<u>Ecological Zone</u>	<u>Aware</u>	<u>Not Aware</u>	<u>Uncertain</u>	<u>All</u>
Grasslands	44%	49%	7%	100%
Farmlands	35%	59%	6%	100%
Parklands	57%	40%	3%	100%
Forest Fringe	77%	20%	3%	100%
All	53%	42%	5%	100%

Of all respondents, 47% have never witnessed or heard about wildlife violations. Of those who have, 62% never report them, 26% seldom do, and 12% often report violations. There are no statistical differences between ecological zones ($p > .05$).

The farmers who have witnessed or heard of violations were asked what would encourage them to report violations more often. Knowledge that a conservation officer or an RCMP would be available to look into the matter immediately was considered most important. Second most important was being able to report violations anonymously; and third, a provincial toll free number. Fourth, and substantially less popular, was the offer of a reward. These were prioritized identically in every ecological zone.

4.7. Evaluation and Profile of Saskatchewan Department of Parks and Renewable Resources

Forty-nine percent of all farmers interviewed feel that Parks and Renewable Resources is very beneficial to wildlife and wildlife habitat, while 32% feel it is somewhat beneficial. One percent feel Parks and Renewable Resources is not beneficial, and 18% said they are not familiar with this Department. There are significant variations in evaluation and awareness of the Department between ecological zones ($p < .01$) as shown in Table 56.

Table 56. Evaluation and Awareness of Sask. Parks and Renewable Resources.

<u>Ecological Zone</u>	<u>Very Beneficial</u>	<u>Somewhat Beneficial</u>	<u>Not Beneficial</u>	<u>Not Familiar</u>
Grasslands	52	30	1	17
Farmlands	41	37	1	21
Parklands	46	32	-	22
Forest Fringe	62	27	2	9
All	49	32	1	18

5.0 DISCUSSION

The survey results indicate that, in general, attitudes toward wildlife and wildlife users are positive. However, there are also indications of a number of problems and some implications for future wildlife management.

Interest in wildlife is quite high among members of the farm community, but 69% feel that amount of wildlife information they receive is inadequate. More information could be provided to the general public, and particularly to the farm community, to fill this demand and enhance awareness

and knowledge of wildlife.

A resounding response is that wildlife users must ask permission for access to all but vacant Crown land. Secondly, wildlife users must practice better ethics and show more consideration for fences, livestock, and private property in general. The frequency of damage by wildlife users is sufficient to cause farmers significant expense and labour, and foster negative attitudes towards wildlife. Damage by wildlife users is also correlated with posting land to prevent access.

Provision of conditional access signs could eliminate much of this damage, as well as opening up much of the posted land. Conditional access signs which forbid vehicles, or warned of the presence of livestock could curtail a substantial amount of the more costly types of damage. In addition, the majority of farmers who posted land with "no hunting" or "no trespassing" signs indicated a willingness to use conditional access signs, if such signs were available free of charge.

Wildlife damage is a problem that is more prevalent, and incurs higher costs to farmers. Programs to prevent waterfowl and big game damage are evaluated quite positively by those who have benefitted from them. However, greater effort is required to make farmers who have chronic wildlife damage, especially big game damage, more aware of these programs. In addition, there are many farmers who experience chronic damage that are not benefitting from these programs, even though they are aware of them.

Activities to prevent damage by beaver were evaluated less positively, with about 50% of assistance recipients feeling the aid they received was not adequate. However, the program was stepped up in 1984.

Loss of habitat will continue to be a problem as 34% of farmers with native vegetation on their farms have definite plans for future development or are undecided. It was determined from this survey that younger farmers are more likely to alter native areas, as well as farmers with larger farms. Data from Statistics Canada indicates that farm sizes are gradually increasing. These two factors indicate that pressure on native habitat may even increase.

Financial incentives would induce approximately 50% of all farmers to retain habitat they had planned to alter. Such programs would be expensive to operate, with the exception of a program which would allow farmers to use their native land to calculate their Wheat Board quota. Non-monetary incentives would encourage approximately twenty percent of farmers to retain habitat areas. Some programs would be more effective in some ecological zones than in others. However, because increased income and convenience are the major reasons for habitat destruction, a major solution would be difficult and expensive. The fact that it is larger farmers who are less inclined to participate in a habitat retention program, and also more inclined to undertake development, makes the solution more elusive.

Province-wide, most who feel enforcement is inadequate think the solution lies foremost in increasing the number of Conservation Officers, and secondly, by increasing patrols year-round. However, most people (62%) do not report violations. Feeling that enforcement personnel were immediately available, and provision for anonymous reporting would prompt more farmers to report violations.

The Department of Parks and Renewable Resources is evaluated positively by 81% of all farmers interviewed with regard to wildlife management. However, 18% are unfamiliar with the Department, possibly because of a relatively recent name change.

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FARMER - WILDLIFE SURVEY

			1	A
1				5

1. Date of Survey:

A horizontal number line with tick marks at every integer from 0 to 6. The number 6 is written below the first tick mark on the left.

-
- 12

22

- 24

-
- A horizontal number line with three tick marks. The first tick mark on the left is labeled with the number 25.

- 28

- 30

- 32

- 34

-
- A horizontal number line with five tick marks. The first tick mark on the left is labeled with the number 35.

- 1) own? (in acres)

A horizontal number line with a starting point labeled '20' at the left end. There are five evenly spaced tick marks extending to the right from the starting point.

- 11) privately lease?

- iii) crown lease?

- iv) other?

2

10. How much of the total area is:

- 1) Cultivated (in acres)

- Forage crops

- grain crops and summerfallow

			1	B
1				5

- ii) Non-cultivated (in acres)

- Native Grassland

A horizontal number line with 6 equally spaced tick marks. The first tick mark on the left is labeled with the number 6 below it.

- Woodland

- Yard

- Water

11. a) How many acres have you drained in the last 5 years? (in acres)

- b) How many of these acres did you also break and bring into cultivation?

26

vation?

1101384

A horizontal number line with tick marks at every integer from 36 to 40. The number 36 is written below the first tick mark, and 40 is written below the last tick mark.

12. How many acres of bush or prairie have you cleared or broken in the past 5 years?

41

13. If you have cleared, broken or drained land in the past 5 years, what were the reasons for doing so?

(Do not read these answers aloud; allow farmer to volunteer answers and place a "1" after each reason that the farmer mentions. If a reason is given that is not listed, place a 1 in the box after "other")

- i) to discourage presence of wildlife and/or hunters
- ii) to increase income
- iii) to "clean up" weedy areas
- iv) to eliminate areas where grasshoppers and other insects live
- v) bulldozing equipment was in area
- vi) to provide better visibility (of livestock, road, etc.)
- vii) to increase ease of manoeuvring machinery
- viii) to remove water from flooded land
- ix) to lower the water table
- x) irrigation
- xi) to control beaver problems
- xii) other

46

57

II. PERCEPTIONS OF WILDLIFE POPULATIONS AND ATTITUDES TOWARD AMOUNT OF WILDLIFE

1 0 2 5

"Now, I'd like to ask you a couple of questions about wildlife populations in this area"

1. In your region, over the last 5 years, do you think there has been a change in the number of:

(Enter the appropriate number in the space behind each species or group)

- 1. Decreased
- 2. Increased
- 3. No Change
- 4. No Opinion
- 5. Not applicable (no habitat on farm or does not occur in this area).

- i) Antelope
- ii) Mule Deer
- iii) White-tailed deer
- iv) Bear
- v) Other big game
- vi) Upland Birds
- vii) Waterfowl (ducks & geese)
- viii) Beaver
- ix) Large furbearers (coyotes, wolves, foxes)
- x) Songbirds

15

2. What is your opinion on the amounts of the following types of wildlife on your land?

(Enter the appropriate number for each species or group)

- 1 Too little
2 Too much
3 Just enough
4 No opinion
5 Not applicable (No habitat on farm, or does not occur in this area)

- i) Big game 78
 ii) Upland birds 7
 iii) Ducks 7
 iv) Geese 7
 v) Beaver 7
 vi) Songbirds 27

3. Do you think that breaking & clearing of native habitat in the last 5 years is significantly decreasing wildlife populations in your area?

- 1 Yes 2 No 3 Undecided 22

III USE OF WILDLIFE

1	2	3	4	5
		0	3	

"This section asks a few questions about your activities that involve wildlife."

1. In the past 5 years, have you hunted:

- 1 Yes 2 No
 i) Big game? 6
 ii) Waterfowl? 7
 iii) Upland game? 7

(If "No" to all the above, please go to question 3)

2. How many days, in the last year, did you hunt:

	Total no. of days	No of days on or within 2 miles of your own land
i) Big Game	<u>9</u>	<u>77</u>
ii) Waterfowl	<u>15</u>	<u>7</u>
iii) Upland game	<u>17</u>	<u>20</u>

3. In the past 5 years, have you done any trapping?

- 1 Yes 2 No (If no, go to question 5) 27

4. a) How many days in total did you trap last year?

22

b) How many days did you trap on your own land last year?

25

5. Non-consumptive forms of wildlife recreation are activities such as wildlife photography, bird watching, nature hiking, building bird feeders and houses, etc.

a) Do you or any of your immediate family participate in any activities such as these?

- 1 Yes 2 No
(If no, go to section IV)

28

b) If yes, what proportion of your and your family's non-consumptive activities occurs on your land?

- 1 0-25% 3 26-50%
2 51-75% 4 76-100%

29

IV ATTITUDES TOWARD WILDLIFE

			0	4
--	--	--	---	---

1. a) Does the presence of wildlife add to your enjoyment of working or living on your farm?

- 1 Yes 2 No 3 Undecided

6

b) If yes, which of the following species add enjoyment:

(Enter the appropriate number for each species group)

- 1 Yes
2 No
3 Undecided

- i) All wildlife (if yes, go to question 2)
ii) Big Game
iii) Upland Birds
iv) Waterfowl
v) Furbearers
vi) Songbirds

12

2. a) Does the presence of wildlife subtract from your enjoyment of working or living on your farm?

- 1 Yes 2 No 3 Undecided

13

b) If yes, which of the following species subtracts enjoyment?

(Enter the appropriate number for each species group)

- 1 Yes
2 No
3 Undecided

- i) All wildlife (if yes, go to question 3)
ii) Big Game
iii) Upland Birds
iv) Waterfowl
v) Furbearers
vi) Songbirds
vii) Other

20

V ATTITUDES TOWARD WILDLIFE USERS

			0	5
1				5

1. a) Do you approve of hunting:

- | | | |
|--------------------|------------------------------------|-----|
| <u>1</u> Yes | 1) Big game | [] |
| <u>2</u> No | ii) Upland birds | [] |
| <u>3</u> Undecided | iii) Waterfowl | [] |
| | iv) Other (gophers, rabbits, etc.) | [] |
| | | 9 |

b) Do you approve of trapping?

- | | | |
|--------------------|--|-----|
| <u>1</u> Yes | | |
| <u>2</u> No | | |
| <u>3</u> Undecided | | [] |
| | | 10 |

2. Do you think it is important that people ask permission to hunt on:

- | | | |
|--------------------|--|-----|
| <u>1</u> Yes | 1) Private farmland that the owner or operator lives on or near to | [] |
| <u>2</u> No | ii) Private farmland that the owner or operator does not live on, or near to | [] |
| <u>3</u> Undecided | iii) Organized pastures (community, PFRA, etc) | [] |
| | iv) Crown land, privately leased | [] |
| | v) Crown land, vacant | [] |
| | | 15 |

3. Do you think it is important that people ask permission to set traps on:

- | | | |
|--------------------|---|-----|
| <u>1</u> Yes | 1) Private farmland that the owner or operator lives on or near to | [] |
| <u>2</u> No | ii) Private farmland that the owner or operator does not live on or near to | [] |
| <u>3</u> Undecided | iii) Organized pastures (community pastures, PFRA, etc.) | [] |
| | iv) Crown land, privately leased | [] |
| | v) Crown land, vacant | [] |
| | | 20 |

4. a) This fall (1983), how many people that you know of hunted on your land for: (If unknown, enter "U")

- i) Big game
- ii) Upland birds
- iii) Waterfowl
- iv) Other

[]
[]
[]
[]
24

b) This fall how many people asked permission to hunt on your land for: "

- i) Big game
 - ii) Upland birds
 - iii) Waterfowl
 - iv) Other
- (IF ZERO, go to d)

[]
[]
[]
[]
28

c) Of these how many people did you give permission to hunt:

- i) Big game
- ii) Upland birds
- iii) Waterfowl
- iv) Other

[]
[]
[]
[]
32

d) Who do you give permission to hunt on your land?

(Enter "1" into space following the appropriate answer. Leave other 3 spaces blank)

- i) Almost everyone
- ii) Friends & Family only
- iii) No one
- iv) Other

[]
[]
[]
[]
36

e) Do you feel that hunting pressure on your land, over the past 5 years, has increased, decreased, or stayed the same for:

- 1 Increased
- 2 Decreased
- 3 Same
- 4 Not sure

- i) Big game
- ii) Upland birds
- iii) Waterfowl

[]
[]
[]
39

5. a) In the past 5 years, has anyone, including you or a family member trapped on your land?

- 1 No
2 Yes, a family member or I
3 Yes, someone other than family member
4 Both the above.

40

(If response is 2, 3 or 4, go to question 6)

- b) If no would you allow other people to trap on your land if they asked permission to?

- 1 Yes 2 No 3 Undecided

(If yes, go to question 6)

- c) If no, why not?

(Do not read options aloud; allow respondent to give answers, then enter a 1 into box behind reasons they give)

- i) Traps pose a hazard to livestock and people
ii) Consider trapping inhumane
iii) Feel furbearers need protection in this area
iv) Don't want others on land
v) Other

46

6. a) Do you approve of others pursuing non-consumptive wildlife activities such as bird watching or wildlife photography on your land?

- 1 Yes
2 Yes, if they ask permission
3 Yes, but friends and relatives only
4 No

- b) In the past, have you had non-consumptive wildlife users hiking, taking pictures or bird watching on your land?

- 1 Yes 2 No
(If no, go to section VI)

48

- c) If so, how many last year?

51

VI LAND POSTING

			0	6
				7

1. a) Have you ever posted signs designed to limit public access to your land?

1 Yes 2 No (If no, go to Section VII) 6

b) How many acres do you have posted this year?

							11

c) Overall, has the amount of land you post changed over the last five years?

1 I post more now 2 I post less now
3 I post the same amount 4 Didn't farm 5 years ago 12

2. a) What type of land do you post?

<u>1</u> Yes	i) The yard or home quarter	<u>18</u>
<u>2</u> No	ii) Around livestock	<u>18</u>
	iii) Whole farm	<u>18</u>
	iv) Wildlife areas	<u>18</u>
	v) Land that is far from residence	<u>18</u>
	vi) Other	<u>18</u>

2 b) Do you post your land against:

<u>1</u> Yes	i) Everyone	<u>18</u>
<u>2</u> No	ii) Hunters	<u>18</u>
<u>3</u> Undecided	iii) Vandals, drinking parties or other	<u>21</u>

(If hunters are not a reason for posting land, go to question 3).

c) What are the major reasons for posting your land against hunters, in order of importance?

(Do not read these answers aloud; allow respondent to volunteer answers, and prioritize them).

<u>1</u> most important	i) Safety of self & family	<u> </u>
<u>2</u> 2nd most important	ii) Protect wildlife	<u>22</u>
<u>3</u> 3rd most important	iii) To protect property	<u> </u>
<u>4</u> 4th most important	iv) To keep vehicles off land --	<u> </u>
<u>5</u> 5th most important	to prevent people from driving	<u> </u>
	on land or leaving gates open	<u> </u>
	v) Hunters have caused problems in the past	<u> </u>
	vi) To protect livestock from hunters	<u> </u>
	vii) To limit the number of hunters on land	<u> </u>
	viii) Other	<u> </u>
		29

3 a) What type of signs do you use?

<u>1</u> Yes	i) No trespassing	<u> </u>
<u>2</u> No	ii) No hunting	<u>30</u>
	iii) Hunting with permission only	<u> </u>
	iv) Hunting on foot only,	<u> </u>
	or no vehicles past this point	<u> </u>
	v) No hunting - cattle at large	<u> </u>
	vi) Please close gate	<u> </u>
	vii) Other	<u> </u>
		36

b) If you use "No Hunting" or "No Trespassing" signs only, would you switch to any of the following signs, if they were available free of charge?

<u>1</u> Yes	i) Hunting with permission only	<u> </u>
<u>2</u> No	ii) Hunting on foot only	<u> </u>
<u>3</u> Undecided	iii) No vehicles past this point	<u> </u>
	iv) Please close gates	<u> </u>
	v) Other (specify)	<u> </u>
		41

VII WILDLIFE USER DAMAGE

			0	7
--	--	--	---	---

1. a) Have hunters, trappers or non-consumptive wildlife users caused you problems or damaged your property within the last 5 years?

<u>1</u> Yes	<u>2</u> No	(If no, please go to Section VIII)	<u> </u>
			6

- b) If yes, what types of problems have you encountered within the last year (1983), and what was the extent of damage? (Either in dollars and/or hours of work to remedy problem)

Note: (- Round off hrs. of work to nearest half hour, & if necessary, enter a half hour as .5

- Round off cost of problem to nearest dollar & do not use decimals.)

TYPE OF PROBLEM	NO. OF TIMES IT OCCURRED	EXTENT OF PROBLEM	
		Hrs. of work	Dollar value
i) Gates left open	<u>7</u>	<u>9</u>	<u>15</u>
ii) Fences cut or damaged	<u>16</u>	<u>1</u>	<u>1</u>
iii) Garbage left	<u>25</u>	<u>1</u>	<u>1</u>
iv) Open pits left	<u>34</u>	<u>1</u>	<u>1</u>
v) Crop trampled or driven on	<u>43</u>	<u>1</u>	<u>1</u>
vi) Buildings or machinery damaged	<u>52</u>	<u>1</u>	<u>1</u>
vii) Livestock injured or killed	<u>61</u>	<u>1</u>	<u>1</u>
viii) Other	<u>70</u>	<u>1</u>	<u>18</u>

- c) Which group of wildlife users do you think cause the most problems?

- 1 Big game hunter
- 2 Upland bird hunter
- 3 Waterfowl hunters
- 4 Trappers
- 5 Non-consumptive wildlife users
- 6 Don't know
- 7 Other

79

- d) What age group of wildlife users do you think cause the most problems?

- 1 16-20
- 2 21-30
- 3 31-40
- 4 51 and older
- 5 Don't know
- 6 No difference between age groups

80

VIII BENEFITS AND LOSSES FROM WILDLIFE

			0	8
1			5	

1) Did you or any of your immediate family receive any of the following benefits from wildlife presence on your land within the last year?

- | | | |
|-------------------|---|---------------|
| <u>1</u> Yes | i) Income from trapping | <u> </u> |
| <u>2</u> No | ii) Meat from hunting | <u> </u> |
| <u>3</u> Not Sure | iii) Enjoyment of hunting or trapping | <u> </u> |
| | iv) Visits from friends or relatives who came to hunt, view or trap wildlife | <u> </u> |
| | v) Enjoyment of viewing or photographing wildlife | <u> </u> |
| | vi) Payment for providing services to hunters (such as guiding, digging pits, transporting carcasses) | <u> </u> |
| | vii) Payment from hunters for access to land | <u> </u> |
| | viii) Other | <u> </u> |

13

2. a) Did you suffer any loss from wildlife presence on your land within the last year?

- 1 Yes 2 No

56

b) If yes, what type of loss and how large a loss?

Type of loss	Value of loss
i) Crop damage by waterfowl	\$ <u> </u>
ii) Damage by elk, deer or other ungulates	\$ <u> </u>
iii) Livestock killed by Predators	\$ <u> </u>
iv) Beaver destroying trees and flooding land	\$ <u> </u>
v) Other damage	\$ <u> </u>

34

"Now, I'd like to get your opinion on some current activities and problems that pertain to wildlife."

3. a) In your area (your R.M.) how often do you have problems with waterfowl damaging crops?

- 1 Never 3 Sometimes
2 Seldom 4 Frequently

39

b) Do you know of any of the following activities occurring in your area in the last 5 years?

Operation of lure crops or bait stations to divert waterfowl away from farmers' crops; or the use of scare cannons to prevent crop damage by waterfowl?

- 1 Yes 2 No
(If no, go to e)

40

- c) Have you received any direct benefit from any of the above activities? (i.e. have you borrowed scare cannons, or are bait stations or lure crops close enough to you to divert waterfowl?)

- 1 Yes 2 No
(If no, go to e)

41

- d) The activities mentioned above are carried out under the Waterfowl Crop Depredation Program. Do you feel the activities you know of are successful in helping landowners prevent damage by waterfowl in your area?

- 1 Not at all successful 3 Very successful
2 Moderately successful 4 Undecided

42

- e) Do you know that compensation for waterfowl damage to crops is available from Saskatchewan Crop Insurance?

- 1 Yes 2 No

43

- f) Have you received compensation from Saskatchewan Crop Insurance for waterfowl damage in the last 5 years?

- 1 Yes 2 No

44

- 4 a) In your area, how often do you have problems with deer, elk or bear damaging crops, feed stacks or bee hives?

- 1 Never 3 Sometimes
2 Seldom 4 Frequently

45

- b) Do you know of any of the following activities occurring in your area?

- winter feeding of deer or other big game; or provision of fencing, blood meal, or other materials to landowners to prevent damage by deer or elk; or the provision of fencing to protect bee hives from bears?

- 1 Yes 2 No

46

- c) Have you received assistance to prevent wildlife damage, in any of the ways mentioned above, since 1980?

1 Yes 2 No

47

- d) Have you received compensation for deer, elk or bear damage since 1980?

1 Yes 2 No

(If no to all b, c & d above, please go to question 5)

- e) All of the above activities are carried out under the Wildlife-Landowner Assistance Program. Do you feel the activities you know of are successful in helping landowners deal with wildlife related problems?

1 Not at all successful 3 Very successful
2 Moderately successful 4 Undecided

5. a) Have you received assistance in solving beaver problems in the last 5 years?

1 Yes 2 No

50

- b) Do you know of anyone receiving assistance to control nuisance beaver in your area in the last 5 yrs?

1 Yes 2 No

- c) If beaver problems occur in your area, do you feel that the assistance available is adequate to deal with beaver problems?

1 Not at all adequate 3 Very adequate
2 Moderately adequate 4 Undecided
5 Not a problem in this area

6. a) Have you received compensation for livestock accidentally shot by hunters since 1978?

1 Yes 2 No

- b) Do you know of anyone receiving compensation for livestock accidentally shot by hunters since 1978?

1 Yes 2 No

54

c) Do you feel that the compensation available adequately makes amends for livestock accidentally shot by hunters?

- 1 Not at all adequately
2 Moderately adequately
3 Very adequately
4 Undecided
5 Not familiar with level of compensation available

55

IX WILDLIFE HABITAT

			0	9
1			5	

"The following question are about wildlife habitat & habitat retention"

1. a) Do you have any of the following types of habitat on you land?

- 1 Yes
2 No

- i) Yard
 ii) Sloughs, creek bottoms, lakeshores
 iii) Grass or shrubland
 iv) Shelterbelts or windbreaks
 v) Bushland

6
10

b) If yes, how many acres of each type of habitat do you have?

- i) Yard
 ii) Sloughs, creek bottoms, lakeshores
 iii) Grass or shrubland
 iv) Shelterbelts or windbreaks
 v) Bushland

3	1			

c) Do you plan to convert any of these areas into cultivated or agricultural land in the foreseeable future?

- 1 Yes 2 No 3 Undecided
 (If no, go to question e)

36

d) Would any of the following incentives make it worthwhile for you to retain these habitat areas? Please note that these incentives are general concepts, rather than specific strategies.

- 1 Yes 2 No 3 Undecided

- i) Provision of signs to acknowledge your contribution to wildlife to neighbours & passersby.
 ii) Creation of game preserves on your land in return for your guarantee that the habitat will not be altered for a specified period of time.

38

- iii) Provision of trees, seeds and information to aid in developing or improving habitat. 39
- iv) Provision of one free big game licence per farm, in return for retaining wildlife habitat. []
- v) Charge a fee to hunters & other wildlife users for access to your land. []
- vi) Allow wildlife habitat acreage to be included in calculating your grain quota. []
- vii) Reimbursement for taxes you have paid on native lands that are not used for agricultural production. []
- viii) An easement, whereby you are paid a fee in return for guaranteeing that certain habitat features will not be altered for an agreed upon period of time. []
- ix) Payment equal to the returns you would receive if the land were out into agricultural use, minus breaking & production costs. 45

e) Would any of the above incentives encourage you to increase the amount of wildlife habitat on your land?

- | <u>1</u> , Yes | <u>2</u> , No | <u>3</u> , Possibly |
|----------------|-----------------|---------------------|
| i) <u>46</u> | vi) <u>57</u> | |
| ii) <u> </u> | vii) <u> </u> | |
| iii) <u> </u> | viii) <u> </u> | |
| iv) <u> </u> | ix) <u>54</u> | |
| v) <u>50</u> | | |

2. If one of the incentives you favored was implemented, how long would you be willing to enroll native parcels of wildlife habitat land on your farm?

- 1 Would participate, but would not guarantee any length of time
- 2 for 1 year 3 for 2 - 5 years 4 for 6 - 10 years
- 5 for 11 - 20 years 6 for more than 20 years 7 would not participate 55

X. THE FUTURE OF WILDLIFE AND WILDLIFE POPULATIONS

			1	0
1				5

1. Do you think that sport hunting and trapping as legally practiced today in Saskatchewan are decreasing wildlife populations significantly in your area (your R.M.)?

- 1 Yes 2 No 3 Undecided 6

2. Do you think that hunting by Treaty Indians, who are exercising their legal rights, is significantly decreasing wildlife populations in your area?

- 1 Yes 2 No 3 Undecided 7

- 3a) Do you think that poaching or illegal hunting and trapping of wildlife is decreasing wildlife populations significantly in your area

(your R.M.)?

1 Yes 2 No 3 Undecided

8

- b) Do you think that enforcement of the Wildlife Act and Regulations is adequate in your area?

1 Yes 2 No 3 Undecided

(If yes, go to question 4a).

- c) What do you think should be done to make enforcement adequate? Please prioritize your answers.

<u>1</u> Most important	i) Increase the number of Conservation officers.	<u> </u>
<u>2</u> 2nd most important	ii) Increase patrols during the hunting seasons	<u> </u>
<u>3</u> 3rd most important	iii) Increase patrols throughout the whole year	<u> </u>
<u>4</u> 4th most important	iv) Increase use of aircraft	<u> </u>
<u>5</u> 5th most important	v) Increase night patrols	<u> </u>
<u>6</u> 6th most important	vi) other (specify)	<u> </u>

15

- d) Have you been aware of a conservation officer in your area in the past year (1983)?

1 Yes 2 No 3 Uncertain

16

- 4 a) When you are aware of poaching, or illegal hunting & trapping, how often do you report these violations to RCMP or Conservation Officers?

1 Never
2 Seldom
3 Often
4 Have never witnessed or heard
about illegal hunting or trapping
(If 4, go to question 5)

17

- b) Would you report illegal hunting or trapping more often if:

- | | | |
|----------------------|--------------------------------------|-----------|
| <u>1</u> , Yes | 1) There was a provincial toll | |
| <u>2</u> , No | free number you could call? | <u> </u> |
| <u>3</u> , Undecided | ii) If you could report anonymously? | <u> </u> |
| | iii) If you were confident a | 19 |
| | Conservation Officer or a | |
| | RCMP officer would be available | |
| | to look into the matter immediately? | <u> </u> |
| | iv) If a reward were offered? | <u> </u> |
| | v) Other? | <u> </u> |
| | | 22 |

5a) How beneficial to wildlife and wildlife habitat do you think the following private and government agencies are?
(place appropriate number after each agency)

- | | | |
|--------------------------------|--|-----------|
| <u>1</u> , Very beneficial | 1) Ducks Unlimited | <u> </u> |
| <u>2</u> , Somewhat beneficial | ii) Saskatchewan Wildlife Federation | <u> </u> |
| <u>3</u> , Not beneficial | iii) Sask. Parks and Renewable Resources | <u> </u> |
| <u>4</u> , Not familiar with | iv) Canadian Wildlife Service | <u> </u> |
| this agency or | v) Saskatchewan Natural History Society | <u> </u> |
| activity | vi) Sask. Department of Environment | <u> </u> |
| | | 28 |

5b) Are you a present or past member of a wildlife conservation association?

- 1, Yes, I am a member of _____
(specify)
- 2, Yes, I have been a member of _____
(specify)
- 3, No
- 29

6 a) Would you like to receive more information about wildlife in Saskatchewan?

- 1, Yes 2, No
(If no, go to question 7)
- 32

b) If yes, would you like to receive more information about:

- i) individual wildlife species, their characteristics and requirements such as food, cover and water.
-

- 1, Yes 2, No

ii) how to prevent wildlife from causing you problems.

- 1, Yes 2, No
- 34

iii) general populations figures - where wildlife species live in the province and how many are harvested by hunters.

1 Yes 2 No

35

iv) what can be done to improve wildlife habitat, such as planting trees, building nesting islands, to attract more wildlife to your farm.

1 Yes 2 No

36

7 Do you have any comments you'd like to make on the wildlife topics we have covered in this survey?

8 Interviewer's comments (Please note any information you feel is relevant or of special interest -- any suggestions the respondent made that are of value, special problems, etc. Please make note of any positive or negative comments respondent makes about Dept. in general or specific activities.